AMIGA COMPUTING

December 90 Issue 31 £2.95

the emulator

is your amiga really something else?

real 3D

reality is an illusion – welcome to the real world

win!

go parallel with a transputer board



INSIDE:

Commodore

1990

CHRISTMAS SHOW

OFFICIAL SHOW GUIDE

12

9 770959 963008

PUBLIC DOMAIN

Shown below is just a selection from over 500 PD titles, carefully chosen for their quality content...and all at Exceptional Prices. Phone for listings NOW! Everything from Demo's to full blown programmes...OUR 'sets' are unique and at BARGAIN PRICES!

'TOP 10' DISKS *Shown in this mag.*
PHONE NOW FOR FULL LISTINGS! **£9.00**

GAMES SET 1 *5 Disk Set*
RISK, MONOPOLY, TETRIS, 2 x 10 FANTASTIC GAMES DISKS...23 GREAT GAMES! **£4.95**

GAMES SET 2 *5 Disk Set*
STAR TREK 1&2, COLOSSAL WORLD ADVENTURE, BATTLEFORCE, TENNIS, MORIA **£4.95**

TOP 5 DEMO's *5 Disk Set*
Updated Daily **£4.95**

UTILITIES SET *5 Disk Set*
MESSY DOS, POWER PACKER, VIRUS KILLER, EUROPA DISK, ARP (Brilliant!) **£4.95**

BUSINESS PACK *5 Disk Set*
BANK, SPREADSHEET, DATABASE, WORDWRIGHT + AMIGA SPELL + CLERK **£4.95**

MUSIC PROGRAMS *5 Disk Set*
GAMES MUSIC CREATOR, SOUNDTRACKER (All Vers), OKTALIZER (8 Channels), NOISETRACKER V2 (Midi Compatible) M. E. D. **£4.95**
Highly Recommended!

MUSIC SAMPLE FILES
(FOR ABOVE) **99p Ea.**

GRAPHICS *5 Disk Set*
MANDLEBROT MOUNTAINS, MANDLEBROT SHOW, GRAPHICS UTILITY DISK, VIDEO APPLICATIONS DISKS 1 & 2, Progs for the Graphics Enthusiast **£4.95**

ANIMATION SET *5 Disk Set*
SOOT, SPACE CHASE (Great!), STEALTHLY 2, STAR TREK MANOEUVRES, THE RUN **£4.95**

OLD FAVOURITES *5 Disk Set*
PUGGS IN SPACE, SPACE ACE, FLASH DIGI CONCERT 3, RED SECTOR MEGA DEMO 1 & 2 **£4.95**

LANGUAGE *5 Disk Set*
NORTH C, SOZABON C, PASCAL COMPILER, C UTILITY DISK, VC + A68K ASSEMBLER **£4.95**

EDUCATION 1 to 5 *5 Disk Set*
The Best selling education around **£4.95**
Learn & Play 1-2 *(under 7's)* **99p Ea**

TRACK
COMPUTER SYSTEMS
'THE TRACK EXPERIENCE'



'THE ENGINE DRIVER' Chris Harvey.

Try the 'Track Experience' TODAY and enjoy your purchase TOMORROW. Our superb back-up will see to that! Experience the unique professionalism from the most famous team in the country. It goes without saying our advice is useful; AND IT's FREE!



'THE LINE GANG' Phone...Martin Galloway, Ian Lane, or Allen Hughes.

A500 AMIGA
SCREENGEMS
Std. Amiga A500 with some Great New Software...

BACK TO THE FUTURE II, BEAST II, DAYS OF THUNDER, NIGHTBREED, DELUXE PAINT II, PLUS AMAZING 20 GAME PACK!

Great Value Only... **£369**

SCREENGEMS TRACKPAK
As above but with a TRACKPAK exclusive to Track Computers...YOU get EXTRA VALUE!
BACK TO THE FUTURE II, BEAST II, DAYS OF THUNDER, NIGHTBREED, DELUXE PAINT II, 20 GAME PACK
1-Disk Storage Box, 1-Mouse Mat, 1-Joystick, 1-Dust Cover, 5-PD Disks*, 5 Blank Disks, Free Track Membership

£389
Exclusive Track Value!

Trackpak includes: 1-Disk Storage Box, 1-Mouse Mat, 1-Joystick, 1-Dust Cover, 5 PD Disks*, 5 Blank Disks, Free Track Membership

* YOU choose any FIVE PD titles from those shown (left)!

20 Great Games specially selected for your enjoyment

1Mb A500 AMIGA
SCREENGEMS
Std. Amiga A500 with some Great New Software (Screengem pack shown above) +0.5Mb. upgrade to a full 1Mb.

1Mb Power at only... **£399**

Add a 'Trackpak' for only £20!

NEW 'RE-INK' YOUR TIRED RIBBONS
A unique fabric spray that can be used up to 100 times to refresh your ribbons

£12.95
Imagine the Savings!

A500 AMIGA SOFTWARE/ACCESSORIES
At TRULY FANTASTIC prices...from Track

SUPERBASE PERSONAL	(rrp £59.95)	£15.00
SUPERBASE II	(rrp £99.95)	£29.95
SUPERBASE PROFESSIONAL & SUPERPLAN	(rrp £350.00)	£149.95
BBC TRANSFER UTILITY *A Real Translation Program to get those BBC files to an Amiga, complete with cable to link both machines together.*		£24.95
TRACK BBC TRANSFER UTILITY + BBC EMULATOR S/W		£49.95
512K MEMORY UPGRADE	*Track Scoop Purchase*	£44.95

OVER 2000
Amiga products always on stock AT LOW LOW PRICES PHONE US NOW!

Phone our Fast Order Line using your Access, Visa or Lombard Charge Cards or send us a Cheque/Postal Order with your order details.
Credit terms are available to customers over 18 (subject to status), just phone for written details & an application form. Requests for credit are required in advance and are available to UK Mainland residents only. APR 36.8% (Variable)
Postal delivery and VAT are included in the prices shown, but Next Working Day courier service is available at an additional cost of £7.50/large item (UK Mainland Only)
All goods are despatched same day payment is confirmed, but note cheques need bank clearance before goods can be despatched.

Track Computers reserve the right to alter specific offers/change prices without prior notice. Goods advertised subject to availability.

E & O E

We are officially appointed agents for TDL's extended warranty scheme which can be purchased either for new or older computer products for periods of one year or more. Phone us now for details and prices!

TDL EXTENDED WARRANTY *Approved Agents*

0332 41817

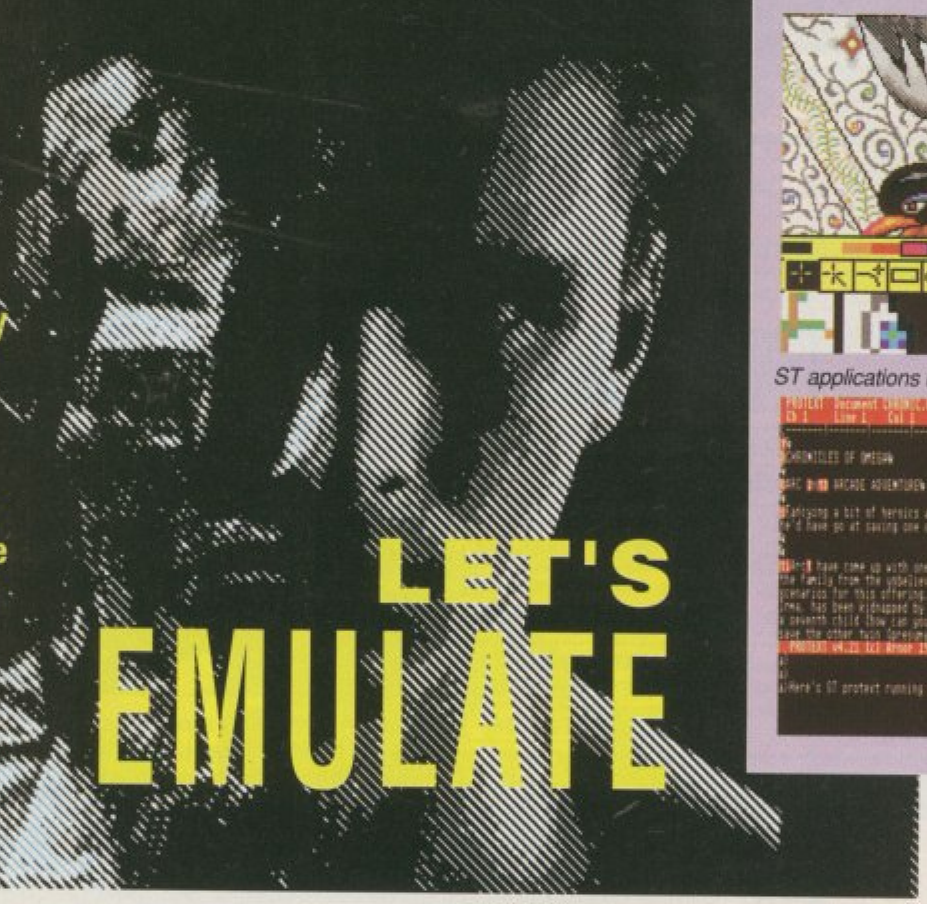
Access VISA Creditcharge

TRACK COMPUTER SYSTEMS
Department ACO/FP3
Blacksmiths Yard
Sadler Gate Derby DE1 3PD
Telephone: (0332) 41817
FAX No: (0332) 44001

VISIT OUR SHOP IN DERBY...
Open Mon to Sat 9am to 6pm Thurs to 9.30pm

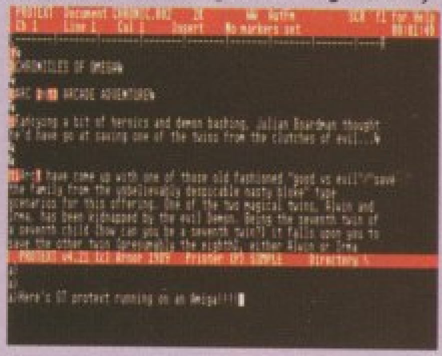
COVER STORY

The quality that separates man from animals is his flexibility. What separates the Amiga from other machines is its ability to beat them at their own game. We thoroughly test the latest in state-of-the-art Amiga camouflage as we mimic an Atari ST, a PC – and even a Mac...32





ST applications running on an Amiga but why?



PORTFOLIO

Stunning work from the Amiga Centre Scotlands animation festival...Page 88







WHO'S WHO

MANAGING EDITOR: Derek Meakin
EDITOR: Nic Veitch
STAFF WRITER: Paul Austin
PRODUCTION EDITOR: Peter Glover
ART EDITOR: Stevie Black
AD MANAGER: John Snowden
AD SALES: Tracy Carroll

Published by Interactive Publishing Ltd
Europa House, Adlington Park,
Macclesfield SK10 4NP.

CHAIRMAN: Derek Meakin
MANAGING DIRECTOR: Hugh Gollner
COMMERCIAL DIRECTOR: David Hirst

Editorial: 0625 878888 **Fax**: 0625 879966
Advertising: 0625 878888 **Subscriptions**: 051 357 2961

Amiga Computing welcomes articles for publication. Material should be sent on Amiga readable disk. The return of material cannot be guaranteed. Contributions can only be accepted by Interactive Publishing on an all-rights basis.

Amiga Computing is an independent publication and Commodore Busines Machines (UK) Ltd is not responsible for any of the opinions expressed.

Newstrade distribution: Comag (0895-444055)

THE DISK



Other mags are green with envy about our disk. And our run of success continues this month with more of the best: There's a music composer that lets you create your own tune from a simple sampled sounds – and then hear what it would sound like when played by an entire symphony orchestra. A Disk Optimiser that dramaticallty speeds up your disk access speed. An incredibly useful Desktop Diary, Calendar and Organiser. Plus TWO great games!

CONTENTS

REGULARS

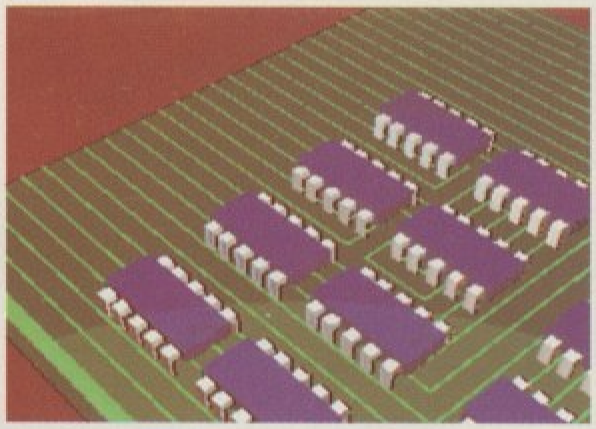


GAMES



COMPETITION

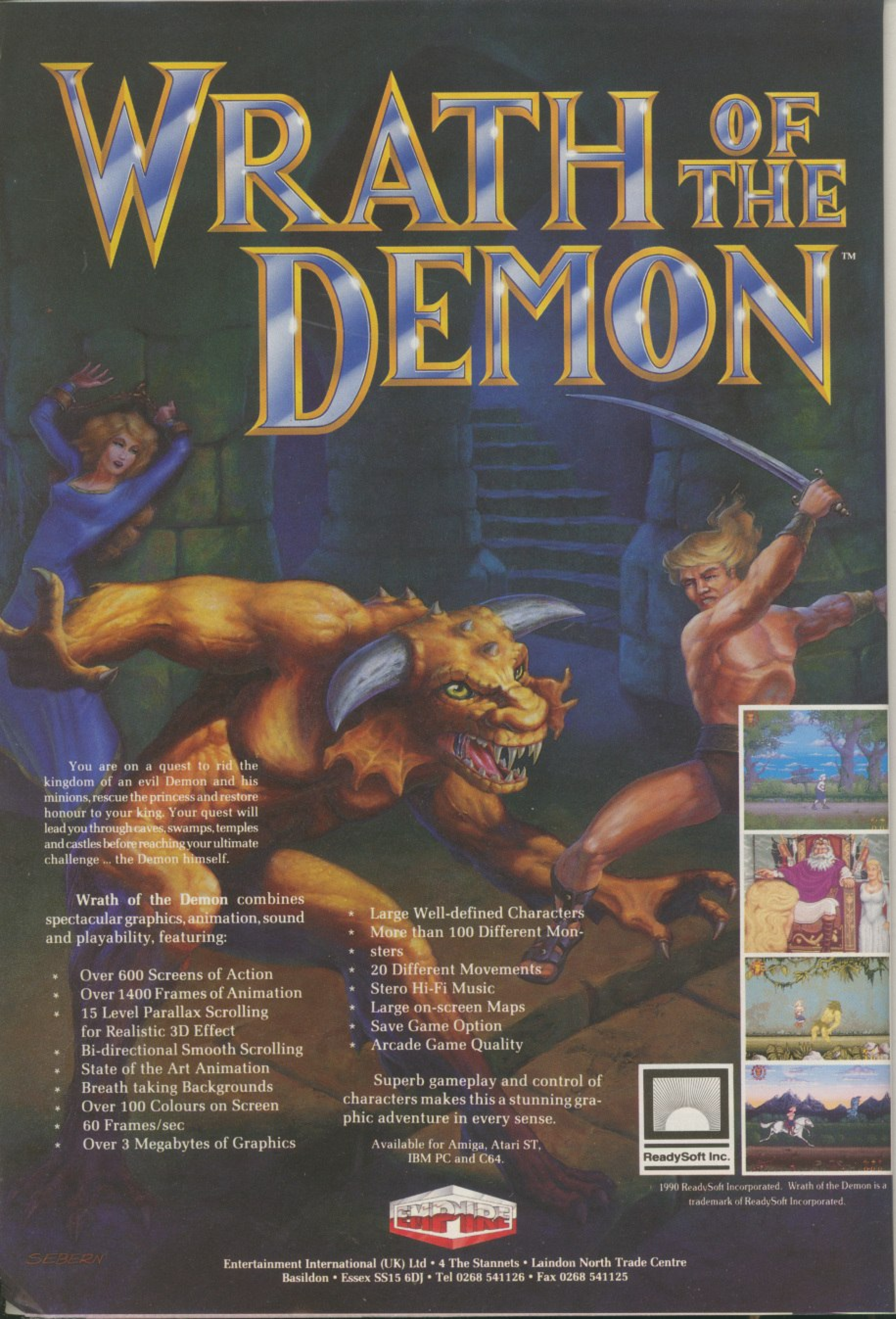
REVIEWS





ALMANAC

The section of the magazine that has something for everyone – from music to comms, DTP to graphics, AMOS to machine code. The top experts in their field bring you all the latest news, plus hints and tips that will help you expand your use of the Amiga in ways you may have never thought possible.


WRATH OF THE DEMON™
You are on a quest to rid the kingdom of an evil Demon and his minions, rescue the princess and restore honour to your king. Your quest will lead you through caves, swamps, temples and castles before reaching your ultimate challenge ... the Demon himself.
Wrath of the Demon combines spectacular graphics, animation, sound and playability, featuring:
* Over 600 Screens of Action
* Over 1400 Frames of Animation
* 15 Level Parallax Scrolling for Realistic 3D Effect
* Bi-directional Smooth Scrolling
* State of the Art Animation
* Breath taking Backgrounds
* Over 100 Colours on Screen
* 60 Frames/sec
* Over 3 Megabytes of Graphics
* Large Well-defined Characters
* More than 100 Different Monsters
* 20 Different Movements
* Stero Hi-Fi Music
* Large on-screen Maps
* Save Game Option
* Arcade Game Quality
Superb gameplay and control of characters makes this a stunning graphic adventure in every sense.
Available for Amiga, Atari ST, IBM PC and C64.
ReadySoft Inc.
© 1990 ReadySoft Incorporated. Wrath of the Demon is a trademark of ReadySoft Incorporated.
EMPIRE
SEBERN
Entertainment International (UK) Ltd • 4 The Stannets • Laindon North Trade Centre
Basildon • Essex SS15 6DJ • Tel 0268 541126 • Fax 0268 541125

AMIGA people

A NEW face has just appeared on the Amiga scene. Steve White joins Commodore after seven years with Acorn.

From his position as schools business development manager, he will have the job of developing Commodore's support for both primary and secondary education – a daunting task which takes in 144 local education authorities and 33,000 schools and colleges.

"Commodore's approach to this market is what impressed me most", said Steve. "Its route to become an established educational supplier has been to listen to what the market needs and respond quickly to those needs.

"This teacher-orientated support is exactly the right way to succeed in education, as demonstrated by the Commodore Business/ Education challenge which is open to all schools and will result in original and creative classroom work that is linked to industry".



Steve White...import from Acorn

BEWITCHED, BOTHERED AND BEWILDERED?

WITH the best will in the world, the well-meaning people who set out to prepare instructional leaflets, training aids and manuals for computers assume that new users have more knowledge than is often the case.

For many, the exciting purchase of a computer soon turns into a mind-blowing worry of confusing switches, ports and leads. They're under pressure from the kids to get the thing up and running.

They grab for the manual and soon after, they grab for the asprin bottle.

Enter the saviour of the great bewildered. Graham Kelly is one of the few who has managed to set aside his encyclopaedic knowledge of the Amiga and cater for those who can just about manage to undo the box.

In fact he goes even further than that and actually shows new owners how to unpack their Amiga in the 30 minute instructional video he has produced on the A500.

Head of the long-established Commodore dealership Trilogic, Graham told *Amiga Computing*: "We know from answering customers' anxious telephone calls that first time buyers find connecting up and switching on the Amiga for the first time a bit bewildering.

"In this video, we have intentionally assumed that the viewer is a complete newcomer to computers and has no knowledge of the Amiga". To ensure that it ➤

WHAT'S new

DRIVE FOR THE 500

LEADING American manufacturer of hard disc systems for Amigas, Supra Corporation, have announced the new SupraDrive 500XP for the Amiga 500.

Using micro-power drive mechanisms which consume less than 4 watts of power, the 500XP combines a complete hard disc system, up to 8Mb of ram and many configuration options.

Its autobooting SCSI interface uses technology similar to Supra's WordSync interface for the Amiga 2000, bringing advanced performance to the 500. It costs $679 for the 20Mb version.



Supra Drive 500XP ...low power consuption

TOASTY SNACK

A TASTY offering aimed at satisfying Amiga owners' appetites for low-cost 3D animation and paint facilities is on the way from a new company in Kansas.

NewTek has received wide American acclaim for its Video Toaster product which includes 3D animation package LightWave 3D and 24-bit paint system Toaster-Paint. Replacing expensive components normally found in broadcast studios, Toaster teams up with the Amiga 2000 to reduce the cost of network-quality television and graphics production. LightWave 3D

AMIGA people

included exactly the information he wanted, Graham made the video himself using a Ferguson S-VHS camera, Panasonic S-VHS VCR, G2 Video Centre and an Amiga 500.

In minute detail, it starts with unpacking the Amiga including a rundown on what should be supplied with it and continues through connecting up, tuning in the TV and loading the demo disc to a brief guide on the Amiga windows system.

"We originally produced the video to include with Amigas we sell but it has proved so popular that it is now in demand in its own right", added Graham.

"We intend to bring out a second video covering more advanced topics which should be available sometime after Christmas".

Called An Introduction To The Amiga 500, the tape is free with Amigas bought from Trilogic (0274 684289) and if sold alone costs £14.99 plus 75p postage and packing.

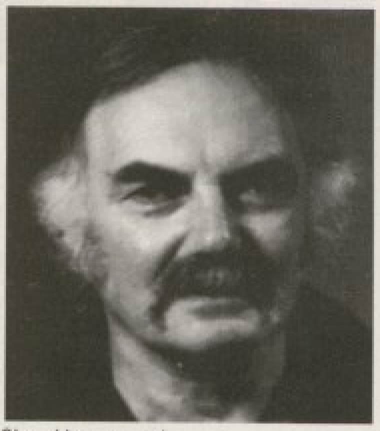
CAT'S CREATOR GOES INTERNATIONAL

AMONG the ranks of avid Amiga People, one of the most interesting, successful and downright friendly members is Stan Hayward, the creator of that internationally loved cartoon character Henry's Cat.

He doesn't make money out of the machine. He doesn't even own one. But he is a staunch ambassador of the Amiga both in this country and abroad.

Stan's support for the Amiga comes from his unstinting work with children. He teams the 2000 with a Chromacolour system and his own talents to bring the joy of animation to thousands of youngsters.

Through workshops, Stan uses the computer to open up new areas of learning development for children as young as four and especially for youngsters with learning difficulties. If it were not for the Amiga, they would be denied the pleasure and stimulation of seeing their drawings come



Stan Ha ywood

to life – a skill from which Stan has made his living for 30 years.

"I work totally with the Amiga. I suppose you could say I'm its biggest salesman", he told Amiga Computing. "I do Henry's Cat to earn my living but I do the computer animation with children for satisfaction".

When interviewed for Amiga People, Stan had just stepped off a plane from Canada where he had been sponsored by Commodore to run workshops at a huge animation festival. While in Canada he made many contacts, particularly among the American Artists in Therapy movement. Undaunted, he is soon to run a teachers workshop in Lewisham and has plans to extend his animation therapy into hospitals and prisons, intending to attract more commercial animation companies to lend their support.

"I am currently working on a new Henry's Cat series for America and there are plans for a new Chromacolour animation package featuring the character", he said. "It will include a scaled-down version of the Chromacolour system specially designed for use in schools, will use Deluxe Paint 3 and will come with a whole range of Henry's Cat movements on disc. Of course, it will be based around the Amiga".

AMIGA, THE GREAT LEVELLER

IT isn't often that a lowly bobby can get the drop on his Chief Super or a traffic warden can tell the CID a thing or two.

The police force is not a body

WHAT'S new

includes modeling, animation and rendering, all integrated into one point and click interface.

ToasterPaint brings broadcast resolution and a full palette within the reach of graphic artists.

Through the built-in frame grabber, users can point on still video frames or create original art in more than 16 million colours.

Video Toaster is a card which fits into the video slot of the Amiga 2000. As *Amiga Computing* went to press, it was undergoing final tests and should be available soon.

For more details, NewTek are at 215 East 8th Street, Topeka, Kansas 66603 – ring 0101 913 354 1146.



Video Toaster graphics in action

PRO APPROACH

CANADIAN firm Eschalon Development have produced a set of professional video utilities for use with the Amiga. Programs include Subtitler, Crediter, Prompter, Image Presenter and Ascension.

Subtitler allows users to import text from a wordprocessor and set font sizes at the click of the mouse to produce subtitles for films and videos.

Crediter scrolls text at any speed with a variety of font sizes and styles. Users simply type in text, change the setting and start the VTR.

Prompter is a complete teleprompting package. With various fonts, styles and video modes, it easily controls speed, cue marker and position.

Image Presenter is an image display program totally controlled through ARexx. Its built-in script language also allows fancy wipes and transitions.

A powerful multi-media presentation tool, Ascension offers an easy-to-use point and click interface and a scripting language. It fully supports sound, samples, speech, animation and stills.

Also included in the package are a side text scroller, video pattern, colourbar, safe area and background generators and video slate plus nine fonts, four

AMIGA people

which easily adapts to role reversal but the Amiga is currently changing all that.

One night a month, that world-renowned centre of crime detection Scotland Yard hosts a unique band of Amiga people – The Metropolitan Police Amateur Computing Club.

When the traffic men turn off their blue lights, the detectives forsake their latest stakeout and the wardens put away their notebooks, computing comes to the fore for the 600 club members. Treasurer of the club and leading light of its popular Amiga section is PC Stuart Fairclough, a member of the Bow Traffic Division which covers the whole of East London.

Open to all 27,000 police officers of The Met, to specials and to some civilians working for the force, the club has a growing-membership.

"Whenever you get a group together, there is always a copper who is an expert on something from plumbing to carpentry", said Stuart. "It's the same with computers. We have a lot of people who are starting out and haven't got a clue and we have members who can pass on their knowledge on anything from wordprocessing and DTP to viruses and databases.

"On the Amiga front, I decided to arrange a monthly series of informal talks coving a whole range of Amiga topics and I also edit a lively Amiga section in our quarterly newsletter.

"The meetings are a good laugh, more like a social club, but instead of talking about golf or some other topic, we play with computers. I'm just a police constable but I can see someone at the club, chat to him about the Amiga then realise he is a Chief Super".

The club includes many champions of the Amiga. Stuart started his computing on a C64 but soon became a convert.

"Once I had the pennies it was straight down to the shop to buy an Amiga 1000", he said. "Now more and more members are going for the Amiga with young club members starting to upgrade to the 2000".

Although the club is purely a social organisation and nothing to do with the official police computer system, members do pick up useful ideas which help them in the increasingly computerised world of crime fighting. One member has developed a computerised key-holder database to replace the manual card files previously used to keep records of official key holders.

"I'm no expert, but I get a lot of club members ringing me up with questions about their Amigas", added Stuart. "The only thing I draw the line at is calls after 10pm. When I'm on the early shift starting at 4am, that's just not on".

FEELING GOOD AND DRY

EXETER'S licensees are rumoured to be weeping over a dramatic drop in bar takings. The beer's not off, so what can be the cause of this worrying phenomenon? The blame can be laid squarely at the door of Commodore's CDTV.

That chirpy Amiga person Jeremy Rhill and his cohorts at Digita International (0395 270273) have been up to their eyes in Dr. Feelgood, their massive health education program aimed at CDTV and backed by Commodore.

"It got so bad that we've been practically chained to the office", reported a jaded Jeremy. "We've even had to do our drinking at our desks".

On the more serious side, Dr. Feelgood was first mooted in a conversation between Jeremy and Commodore's David Pleasance at this year's Spring European Computer Trade Show.

Meetings with Commodore's top American lady Gail Wellington followed and the project landed Digita with three months of hard graft.

Not surprising when you look at the content which takes full advantage of the huge scope of CD.

"It has turned out to be like a home health encyclopaedia", said Jeremy. "It covers First Aid, what to eat, what to drink, how to exercise, what not to touch, what vaccinations you need for which countries and facts as diverse as

WHAT'S new

colour fonts and a variety of brushes.

In Canada, the package costs C$299.95. For details of UK availability, Eschalon Develepment can be contacted on 0101 604 520 1543. They are based at Renaissance Square, New Westminster, British Columbia, Canada, V3M 6K3.

MAKING MUSIC

PROMISING that they will bring "professional quality Midi sequencing within the reach of thousands of Amiga owners", Gajits Music Software (061-434 2768) have announced a new music program Sequencer One.

It features 32 tracks, real and step-time music entry, high resolution recording, graphic displays and editing facilities and comes with helpline support.



Amiga goes back to school

EARLY START

CONTINUING their assault on the education market, Commodore have launched a follow-up to their successful Class of the 90's package. Called First Steps, it is designed to meet the needs of a wider range of users, including youngsters from five upwards and first-time Amiga people.

Based around the Amiga 500, it has been officially endorsed by NAPE, the National Association for Primary Education and costs £599.95. It includes the upgraded IMb Amiga and eight software packages which would cost more than £1,000 if bought individually.

"With First Steps, Commodore has a really strong educational package that will meet the needs of teachers, parents and pupils, particularly in primary schools", said Commodore's national busi-

AMIGA people

how to ring for an ambulance in Mozambique".

Covering 186 countries, it also includes an obstetric section from planning a family through pregnancy and childbirth to baby care, childhood ailments and adolescent problems. Dr. Feelgood includes nearly one million words of information complete with graphics, music and sound effects.

A portable studio was moved to Digita's Exeter headquarters where commentary was added by former STV presenter Kenneth McLeod and tape editing of both voice and music kept the oil burning through many a midnight.

The result promises to be one of the stars of the CDTV revolution and the never-daunted Jeremy is also working on modular floppy disc versions for traditional computers plus a book.

"It has demanded my entire involvement over the past three months", he said. "It turned into such a huge project that I don't know if I would ever undertake such a thing again".

There's hope yet for Devon's ailing licensed trade.

WIDER AUDIENCE FOR AMIGA ART

CHESHIRE photographer Richard Tucker has come up with a useful service for Amiga owners who want a wider circulation for the pictures they create on their screens.

He converts picture files into slides from all formats including overscan and HAM. Richard also digitses slides using an RGB grabber and high quality RGB camera. These pictures can be saved either as IFF or IFF24.

"I had been doing this for my own use on another computer for some time when a number of people asked me if I could do it for the Amiga", he told *Amiga Computing*. "I discovered that the system would work well with the Amiga and it has proved to be very popular.

"Some Amiga owners want slides of what they have produced just for their own interest but the service is particularly useful for those who want to show their pictures to magazines with a view to them being published".

The one-off cost of a slide is £4 but lower prices are available with larger orders. Ring Richard at RTP on 0270 764705.

ADVENTURE WRITING MADE EASY

TONY Heap is a man with a mission. Having specialised in writing text adventures through his company Heyley Software, he now aims to encourage other Amiga people to write their own adventures.

To do this he has produced Hatrack II, an interactive adventure generator which allows even the novice computer buff to write text adventures without the hassle of programming.

A fully interactive package, Hatrack II allows adventurers to play-test their creations then cut down development time by interrupting, examining and altering the state of play. Features include built-in multiple sentence parser; mouse-driven graphical compass/control panel designer; total control over screen layout and the facility to generate your own adventure game disc.

A special program produces standalone adventures which can then be freely distributed without permission. Hatrack II costs £29.95 and Tony has plans to produce a graphics version.

He can be contacted at 27 Winnington Road, Marple, Stockport SK6 6PD.

DISCORD DELUXE

RUMOURS are going the rounds that Electronic Arts are to produce a new version of their popular Amiga melody package Deluxe Music. But they're ugly ones, according to EA spokesman Simon Jeffery.

"There's nothing solid happening on that front at the moment", said Simon. "It could be a possibility for the very far and distant future but not at present".

WHAT'S new

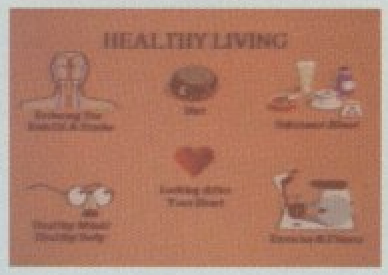
ness development manager for government and education, Peter Talbot.

SEE IT NOW!

VISITORS to December's Computer Shopper Show will have a unique chance to see Commodore's innovative CDTV in action months before it goes on the market.

CDTV will be used to show off Dr. Feelgood, the massive health education program written specially for it by Digita International and backed by Commodore.

Since its launch at the Consumer Electronics Show in



Chicago earlier this year, CDTV (Commodore Dynamic Total Vision) has only made UK exhibition appearances behind glass.

DOUBLE ACT

COMMODORE'S A3000 and design software X-CAD have proved to be a winning combination by fighting off strong competition for a huge order from Hamworthy Engineering, one of Britain's largest engineering companies.

UK systems house Applied Vector Technologies (071-603 3313) have just completed installation of more than £190,000 worth of Amiga 3000s and peripheral equipment.

THINKING BIG

AMIGA owners can now explore mainframe-compatible software through a new version of the APL language launched by Britain's leading specialist supplier MicroAPL (071-922 8866).

The interpreter APL68000 Level II is designed for maximum compatibility with IBM's mainframe APL2 product.

It runs on multi-user Unix machines such as the NCR Tower plus single user micros including the Amiga.

Nested arrays, selective assignment and user-defined operators are among the many features of the language specification and Level II also includes windowing interfaces.

The Amiga version, including coprocessor support, costs £299 with an upgrade price for existing users of £184.

Shopper Show

More space, more stands and more bargains at computing's annual Christmas extravaganza

CHRISTMAS bargains are the name of the game at The Computer Shopper Show. The 26,658 visitors to last year's inaugural show at Alexandra Palace saved around £1 million on special offers.

An exit poll of attendees revealed that in excess of 95 per cent considered purchases there had resulted in "substantial savings" with reported figures ranging from £50 to £1,000.

This year the larger venue of Wembley Conference Centre will accommodate many more stands and with an extra day added, Shopper '90 is tipped to double that record.

Making its exhibitions debut at Shopper will be the Amiga version of K-Spread 4, the latest accounts package from Kuma. Also there will be Adimens 3.0, an advanced relational database produced in association with ADI of Germany. Kuma will be offering special show prices on K-Roget, their computerised Thesaurus.

New at Shopper will be an improved version of Micro English, the educational package from LCL. It has been specially designed to cover the new oral communication section of the 1991 National Curriculum syllabus and will be seen along with a wide range of other LCL education packages covering Maths, English and French.

AMOS: The Creator from Database Software already has a huge following and fans of this creation package will have their first chance to see the next in the series, AMOS 3D, demonstrated.

In a big screen presentation, traditional to Database Software's exhibition appearances, AMOS 3D will be put through its paces along with the latest in the successful Fun School educational series, Fun School 3.

The Amiga Light Phaser Gun, the centrepiece of the US Action stand, will be bundled with a new hunting game. Also featured will be ram expansions and a tutorial disc for Deluxe Paint.

Shareware for the Amiga will have its spot at Shopper on the Advantage stand, which will also include many useful peripherals, while Andrews & Cowen will be selling Amigas together with external drives and a range of leisure software.

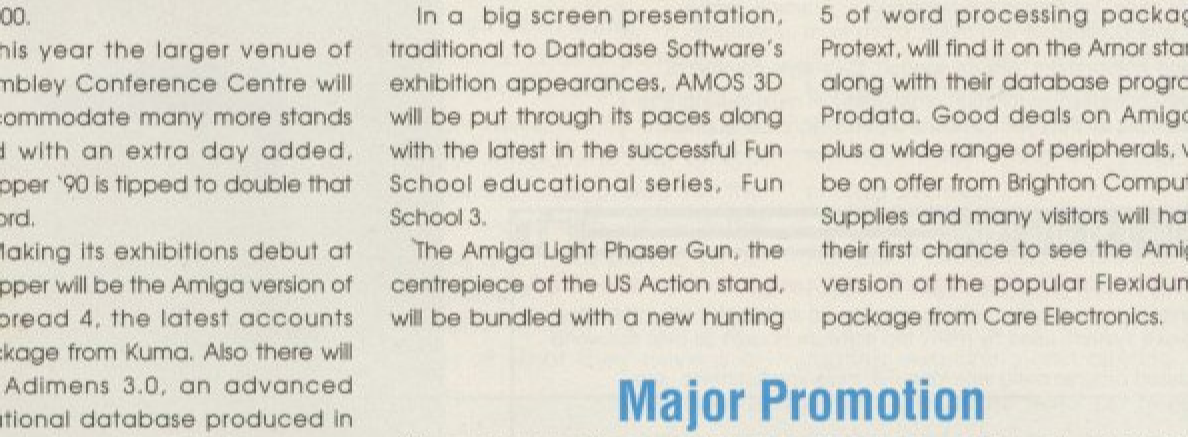
Those who want the new Version 5 of word processing package Protext, will find it on the Arnor stand along with their database program Prodata. Good deals on Amigas, plus a wide range of peripherals, will be on offer from Brighton Computer Supplies and many visitors will have their first chance to see the Amiga version of the popular Flexidump package from Care Electronics.

Major Promotion

AS part of its promotions for The Computer Shopper Show, Blenheim Database Exhibitions have launched the largest ever leaflet distribution for a show of this kind. One million leaflets have gone out to potential visitors with 19 issues of the UK's top computer magazines.

They are also being mailed directly to the 26,658 people who attended last year's show at Alexandra Palace.

Underlining the scope of this exercise, the leaflets weigh in at five tons and if laid end to end would stretch from Bristol to Leeds.



Expandable upgrades for the Amiga, Kick Start cards and virus protectors will be the offerings from new company European Peripheral Distribution, making their Shopper debut, while Evesham Micros will be selling external drives, printers, ram upgrade boards and a variety of software at attractive prices.

G&S Computers will be giving demonstrations of energy management systems while offering good deals on Amigas. GPS will be unveiling a number of new Amiga software titles from the USA. Among the offerings from Gasteiner Technologies will be the Amiga-compatible Gasteiner Mouse.

Shareware discs including games, utilities and business packages will be featured on the Gemini Software stand, and Harpers will feature Amiga hardware and a variety of interesting accessories.

Amiga machines, software and peripherals will be on sale by Micro Anvika while Microtext will be featuring their teletext adaptors with supporting software.

In addition to seeking customers for their Amigas and software, Miles Better Software will also be using the Shopper Show to seek out a suitable distributor for their Amiga tracker ball

As well as running the Computer Football Association finals at Shopper, Mutant Software will have a range of games on sale and public domain buyers will be catered for by Public Dominator.

Rombo will feature their Vidi-Amiga frame grabbing package and more public domain packages will be on offer from both Senlec PD Library and Softville.

When Silica Shop go to a show they usually pack nearly all their stock on to the stand. This year's Shopper Show will be no exception. Among their bonanza of Amiga buys will be ATonce, the world's first 80286 PC AT emulator, Vortex hard



discs, text editor Cygnus Editor II plus the file convertor and image manipulator The Art Department.

Amiga specialists Third Coast Technologies will be offering disc drives, printers, monitors, memory expansion boards and video genlock systems, while WTS Electronics will give good deals on hardware for the Amiga 500.

This will include Mammoth Memory 512k ram expansion, external disc drives and a power supply unit. WTS will also be pleased to tell visitors about their repair and upgrading services.

They're on their way to Wembley

Thousands of computer football players have their sights firmly set on the game's traditional home as they vie for a place in the Computer Football Association Challenge Cup finals to be played at The Computer Shopper Show in December.

And as well as chasing national honours, they could face the best that Europe has to offer when Shopper becomes the venue for the first European Cup of the computer world.

Formed by Steve Anderson of Mutant Software, The Computer Football Association is dedicated to promote excellence in soccer simulation on home computers. For its first ever Challenge Cup competition, it has chosen Anco's Kick Off and Kick Off 2 played on Amiga machines. It will hold the quarter finals, semi finals and final at Wembley Conference Centre on the Sunday of Shopper, December 9.

Already more than 5,000 players have signed up for the preliminary rounds to be played throughout the country. The eventual winner will scoop the 1990 Challenge Cup and a prize of £1,000. A trophy and £500 will go to the runner-up while the last 16 will each receive a medal and £100.

The Italian champion has been lined up to take on the eventual UK champion at Shopper. Organised by the Milan-based K Magazine, the CFA championship has taken Italy by storm with 15,000 entrants. There are also moves to attract the soccer simulation champions from France and Germany to test their skills at Shopper.

"Support for the competition is amazing", said Steve Anderson."At the moment entries are rolling in at 20 a day. We hope to get a big screen put in at The Computer Shopper Show so that supporters and spectators will get a better view of the excellent computer football in store. With such a big entry, the players who win their way through to the final rounds will really be worth watching".

The shop for Santas

THE Computer Shopper Show is going for a record. In line with its Yuletide atmosphere, it aims to pack in the largest number of Father Christmases ever collected under one roof.

Stands will be seasonally decorated for an exhibitors' competition and staff manning them have been asked to turn up in Santa garb.

With 280 stands and co-operation from exhibitors, visitors young and old could be faced with the unique specticle of between 600 and 1,000 bearded gents.

The only request is that they leave their reindeer at home!

Helping hand for charity

THE Computer Shopper Show 1990 will be used as a vehicle to raise money for The Starlight Foundation, a charity set up by Dynasty actress Emma Samms to grant the wishes of seriously ill children.

Starlight has been operating in America since 1982 and now has thriving offshoots in Britain, Canada and Australia. Through its work, wishes as diverse as flying in a jet fighter, meeting Santa Claus in Lapland, owning a puppy and marching with the Scots Guards have been arranged for critically ill and handicapped youngsters.

"We are delighted to work with Blenheim Database, organisers of the Computer Shopper Show, who are pulling out all the stops to help us during the event", said Starlight's Iva Sheinbart.

It's so easy to get there

With such a wealth of products on offer – and much more besides – Amiga owners will be thankful that the new Wembley show venue is easily accessible.

By Underground, the Jubilee or Metropolitan (Stanmore) lines take you to Wembley Park,and at peak times Bakerloo can be taken to Wembley Central.

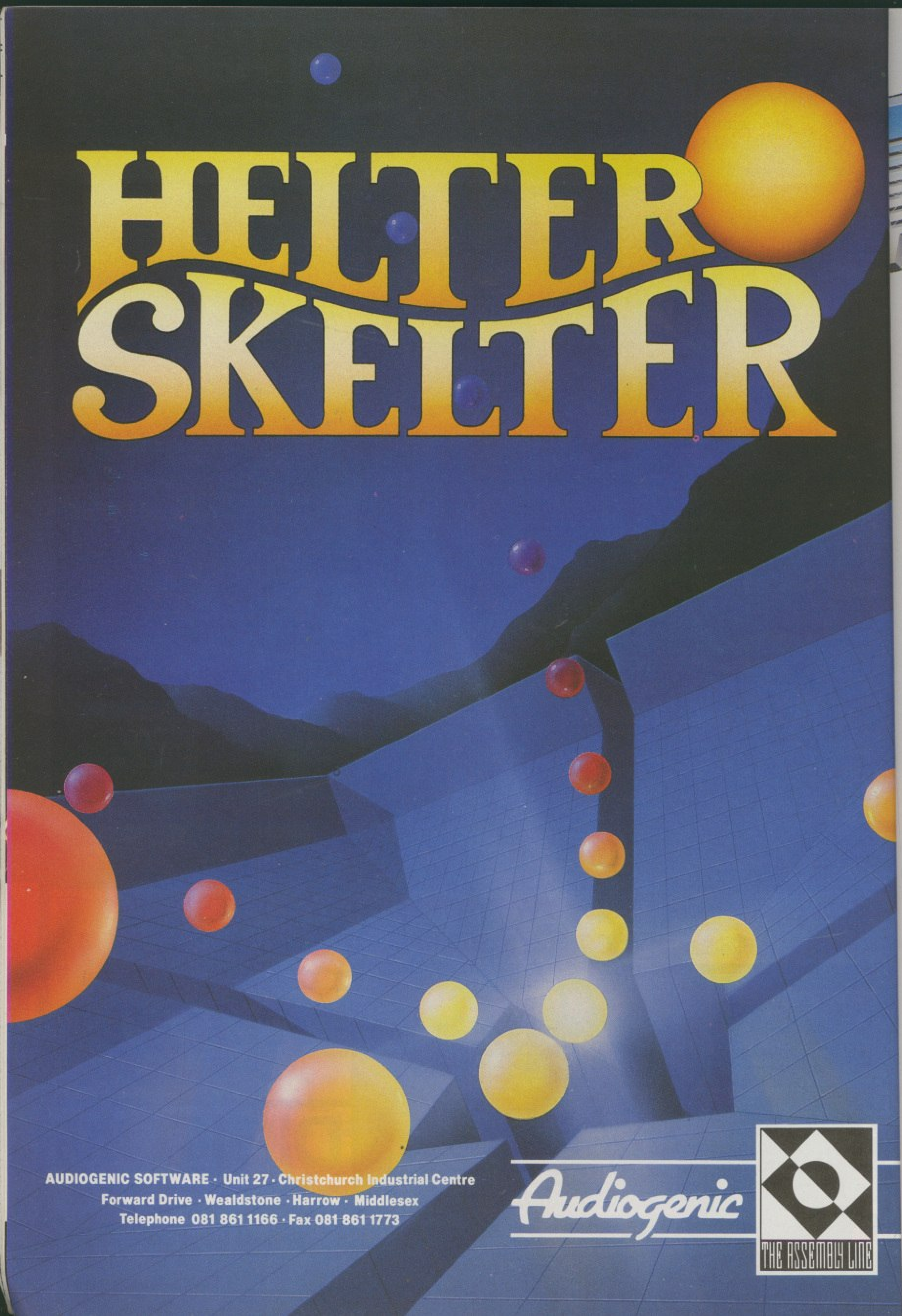
Regular trains run to Wembley Central from Euston or Broad Street and to Wembley Stadium from Marylebone. Wembley is easily reached by car from the M25, M40, M4 or M1.

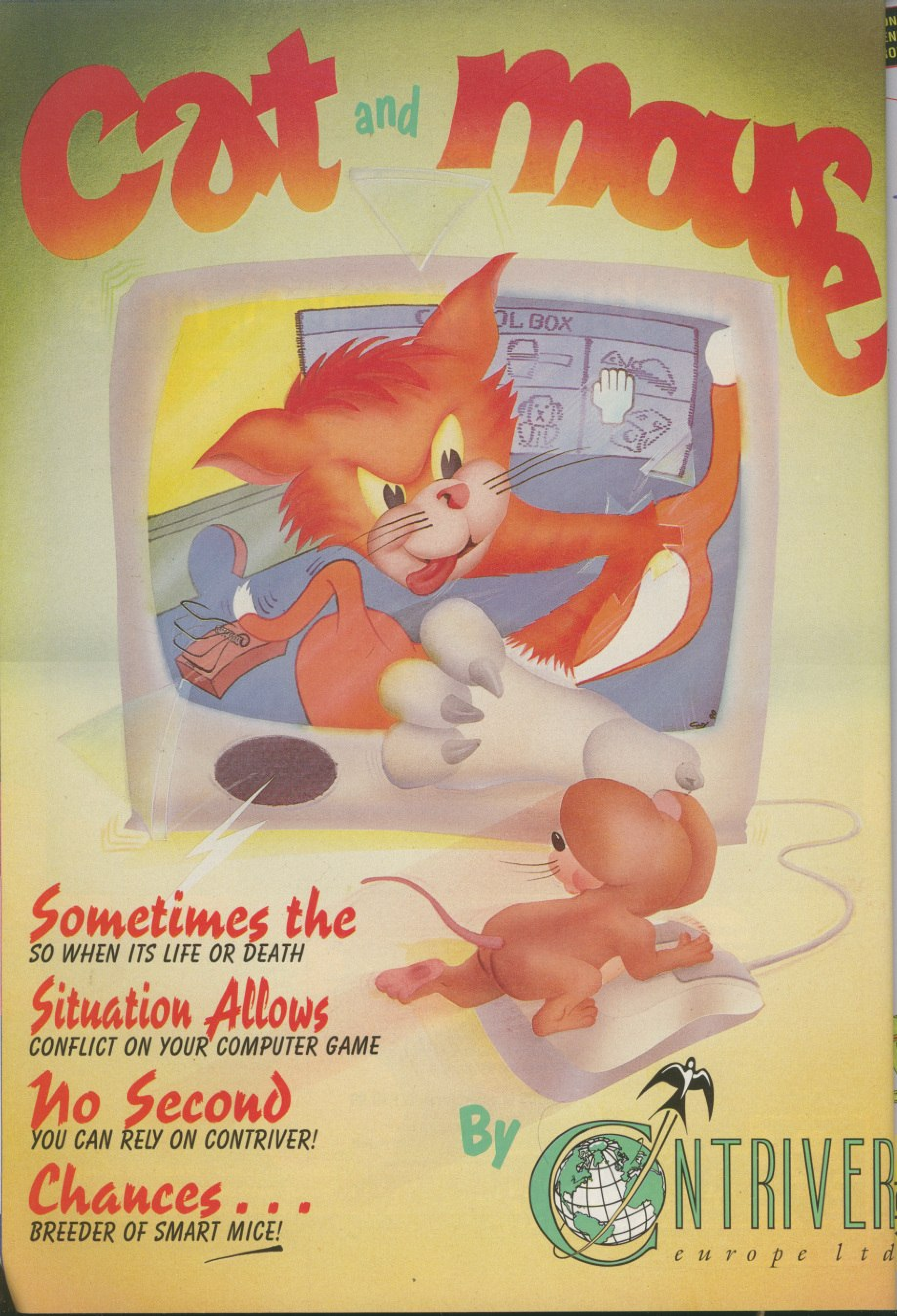
The show runs from Thursday December 6 to Sunday December 9 at Wembley Conference Centre and will be open from 10am to 6pm on the Thursday and Friday, 9am to 6pm on Saturday and 10am to 5pm on Sunday.

Admission is £5 for adults, £3.50 for children under 16 with £1 off for tickets booked in advance. Also available is a pre-paid family ticket covering two adults and two children for £12.

For fast and easy credit card bookings, the 24 hour hotline number is 051-357 1736.

● There is a voucher for reduced priced tickets on Page 43.


HELTER SKELTER
AUDIOGENIC SOFTWARE · Unit 27 · Christchurch Industrial Centre
Forward Drive · Wealdstone · Harrow · Middlesex
Telephone 081 861 1166 · Fax 081 861 1773
Audiogenic
THE ASSEMBLY LINE


Cat and Mouse
Sometimes the
SO WHEN ITS LIFE OR DEATH
Situation Allows
CONFLICT ON YOUR COMPUTER GAME
No Second
YOU CAN RELY ON CONTRIVER!
Chances . . .
BREEDER OF SMART MICE!
By
CONTRIVER
europe ltd

ONLY STOCK GENUINE UK PRODUCTS!!!

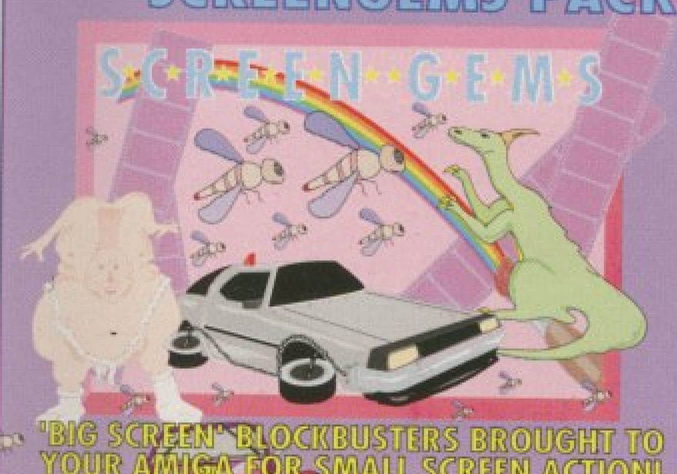
Choices to Keep you Spellbound at Truly Wizard Prices!

NOW OPEN SAT & SUN TOO!!!

HOOT, HOOT... ASK ABOUT NEW AMIGA PACKS

MERLIN

AMIGA A500 SCREENGEMS PACK



'BIG SCREEN' BLOCKBUSTERS BROUGHT TO YOUR AMIGA FOR SMALL SCREEN ACTION!

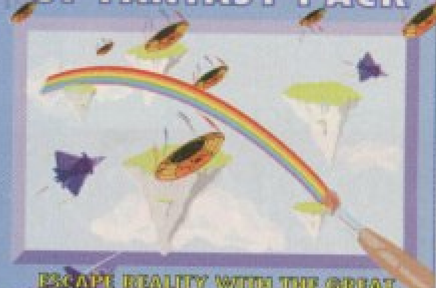
COMPLETE WITH FIVE GREAT SOFTWARE TITLES
Back to the Future II, Beast II, Days of Thunder, Nightbreed, & for arts' sake Deluxe Paint II

Amiga A500 with Modulator, Mouse, 1 Meg Internal Disk Drive, 512K RAM, All Connecting Leads, Kickstart 1.3, 4096 Colours, Built-in Speech Synthesis Multi Tasking, Workbench 1.3 System Disk, and a full set of manuals.

Film Fun at a STAR PRICE!

£365
Including VAT and Postal Delivery!

AMIGA A500 FLIGHT OF FANTASY PACK



ESCAPE REALITY WITH THE GREAT 'FLIGHT OF FANTASY' GAMES PACK!

Amiga A500 with Modulator, Mouse, 1 Meg Internal Disk Drive, 512KRAM, All Connecting Leads, Kickstart 1.3, 4096 Colours, Built-in Speech Synthesis, Multi Tasking, Workbench 1.3 System Disk, & Operation Manuals.

Plus... FOUR GREAT SOFTWARE TITLES...
F29 Retaliator, Rainbow Island, Escape from the Planet of the Robot Monsters, & Deluxe Paint II

Fantasy hit at the Truly Realistic Price of Just...
£365
Including VAT and Postal Delivery!

AMIGA A500 BATMAN PACK



THE CAPED CRUSADER BATTLES IT OUT WITH JOKER IN A THRILLING EPISODE!

Amiga A500 with Modulator, Mouse, 1 Meg Internal Disk Drive, 512KRAM, All Connecting Leads, Kickstart 1.3, 4096 Colours, Built-in Speech Synthesis, Multi Tasking, Workbench 1.3 System Disk, & Operation Manuals.

Plus... FOUR GREAT SOFTWARE TITLES...
Batman the Movie, F18 Interceptor, New Zealand Story & Deluxe Paint II

Same Batpack, same Batvalue at the same BATPRICE of only...
£365
Including VAT and Postal Delivery!

AMIGA FIRST STEPS PACK WITH 1Mb.

NEW **AMIGA EDUCATION PACK** Approved by the National Association of Primary Education

Amiga A500 Computer, A501 0.5Mb Upgrade, Pro-Write 2.5 (W.Proc.) Deluxe Paint II, Deluxe Print II, Infofile, Music Mouse, Amiga Logo Talking Turtles, Let's Spell at Home, Resource BBC Emulator, 10 CBM Disks and a Mouse Mat!

With FREE INTRO VIDEO approved by National Council of Educ. Tech.

£539
Add a Scorers Pack too!

NEW...AMIGA CLASS OF THE 90's PACK WITH 1Mb...NEW **£529**

WE SAY CHOICE... *and we mean it.*

Add one or more of our 'SORCERORS PACKS' to extend your choice and SAVE EVEN MORE...Only from MERLIN!
(Only available when you buy an Amiga, see notes on individual packs)*

CHOICE 1 — SORCERORS PACK 1
Mouse Mat
Amiga Dust Cover
Megablaster Joystick
Ten Blank Disks in Library Case
Only... **£16**
*(*When purchased with an Amiga)*

CHOICE 2 — SORCERORS PACK 2
10 GREAT GAMES (Worth £219.50)
Datastorm, E-Motion, Dungeon Quest, Kid Gloves, Grand Monster Slam, Powerplay, RVF Honda, Shufflepuck Cafe, Tower of Babel, Microprose Soccer
Only... **£25**
*(*When purchased with an Amiga)*

CHOICE 3 — SORCERORS PACK 3
TOP SOFTWARE TITLES
Select ONE or MORE software title from our 'SORCERORS SEVEN' and pay LESS than the already discounted prices shown! CHOOSE...
DICK TRACY, TEENAGE MUTANT HERO TURTLES, F19 STEALTH FIGHTER, BETRAYAL, ROBOCOP II, GREMLINS II, INTERNL. SOCCER CHALLENGE
BUY AS MANY AS YOU LIKE...at LESS THAN the Discounted Prices Shown Below! Phone for Details
*(*When purchased with an Amiga)*

CHOICE 4 — SORCERORS PACK 4
THE ULTIMATE IN AMIGA EXTRAS
Mouse Mat, Amiga Dust Cover, Megablaster Joystick, Ten Blank Disks in Library Case, Ten Great Games (as Pack 2), PLUS...your choice of one of our "Sorcerors Seven" Games!
Only... **£38***
* £42 if ordering 'F19' or 'Betrayal'
*(*When purchased with an Amiga)*

FREE with EVERY Amiga ...from MERLIN EXPRESS you'll receive this...

Free from Merlin! **HOLIDAY** Accommodation Vouchers for UK Hotels, London Breaks etc, (Phone and ask for full details)

This offeris limited and made only subject to availability (Check with us prior to ordering)

BULK BUY DISCOUNT!
If you buy your Amiga WITH other hardware (eg Printer or Monitor etc etc) ASK ABOUT YOUR EXTRA DISCOUNT!

MONITORS *Including FREE Amiga Leads!*

PHILIPS CM8833 14" Medium Res. Colour, Twin speakers, Green screen switch	£249
COMMODORE 1084S	£259
PHILIPS AV7300 TV TUNER	£39.95

Receive TV programmes on your Commodore or Philips Monitors...AT THIS LOW PRICE, WHILST STOCKS LAST (RRP £74.74, Pay just £34.95 if bought with a Monitor)

FREE 12 Months on site Maintenance with CM8833 Monitors and AV7300 Tuners FREE

PHONE NOW FOR DETAILS OF PHILIPS NEW CM8833/II ARTIST MONITORS!

MERLIN SUPER MONITOR PACK

ONLY A FEW LEFT AT THIS GREAT PACK PRICE!

PHILIPS CM8833 MONITOR (rrp £310.49)
PHILIPS AV7300 TV TUNER (rrp £74.74)
PHILIPS TILT/SWIVEL STAND (rrp £14.95)
QUALITY CM8833 DUST COVER
Inc. FREE Amiga Lead

FREE...12 Months on site Maintenance with Monitor & Tuner!

£289

MERLINS "SORCERORS SEVEN" SOFTWARE

PRICES INCLUDE POSTAGE

SEVEN OF THE LATEST SOFTWARE RELEASES BROUGHT TO YOU BY MERLIN EXPRESS AT A PRICE TO BEWITCH...

Please note the titles listed are advertised now based on the release dates issued by software distributors. Each title should be available on or before the sale date of this magazine. We do not, however, accept responsibility for delays in release dates by software houses or distributors. We strongly recommend you check availability before placing your order. Faulty software will ONLY be replaced with the same title, NO REFUNDS CAN BE GIVEN.

DICK TRACY	£19.99
TEENAGE MUTANT HERO TURTLES	£19.99
GREMLINS II	£19.99
ROBOCOPII	£19.99
F-19 STEALTH FIGHTER	£23.99
BETRAYAL	£23.99
INTERNATIONAL SOCCER CHALLENGE	£19.99

(RRP for the games shown above are either £24.99 or £29.99)

Extra discount when purchased with an Amiga or if buying more than one title!

PRINTERS *Inc. FREE Amiga Leads!*

STAR LC 10 Mono	£159
STAR LC 10 Colour	£205
STAR LC 24/10 Mono	£239

FABULOUS NEW RANGE FROM STAR, RING FOR FULL IMPROVEMENT DETAILS!

STAR LC200 Colour 9 Pin Dot Matrix, 180/45cps COLOUR	£205
STAR LC24/200 Mono 24 Pin Dot Matrix, 200/67cps MONO	£255
STAR LC24/200 Colour 24 Pin Dot Matrix, 200/67cps COLOUR	£289

Commodore 3.5" DISKETTES
BOX OF 10 £9.45
FIFTY (50) £44.95
HUNDRED(100) With FREE Lockable 80 Cap. Storage Box *Great Offer...* £84.95

SECOND DISK DRIVES

CUMANA CB 354	1Meg. 3.5" Single Internal	£69
CUMANA CAX 354	1Meg. 3.5" Single External	£85
CUMANA CAX 1000	1Meg. 5.25" Single External	£129

A590 20Mb HARD DISK DRIVE
At a Great NEW LOW PRICE! £279
(Coming Soon! Official CBM 1Mb & 2Mb upgraded versions at super prices! Ask for details

AMIGA ACCESSORIES

DISK STORAGE BOXES	
40 Capacity	£6.95
80 Capacity	£8.95
MOUSE MATS	£4.95
DUST COVERS... Amigas, Star Printers, Philips Monitors	£5.95
SPEEDKING-Autofire	£10.95
QUICKSHOT TURBO II	£10.95

ALL MERLINS PRICES INCLUDE V.A.T. AND POSTAGE (UK Mainland)

Whilst every effort is made to ensure that the information shown in our advertisement is correct, you should ALWAYS confirm any Offers, Prices, Availability etc. prior to placing your order. We endeavour to supply everything as shown and we will ONLY change anything should it be forced upon us by manufacturers or our suppliers. Because our advertising is booked so far in advance; Merlin therefore reserve the right to alter equipment specifications, withdraw any product/offer or update prices (and that can be either up OR down), without prior notice. PLEASE CHECK DETAILS PRIOR TO ORDERING.

Merlin guarantee NEVER to supply anything that has been subject to change without you, the customer, being informed of, and agreeing to, that change.

ORDERING: Just phone our 24 hour order line using your Access/Visa card, OR, send a cheque/postal order with your requirement details. (Cheques need clearance unless issued by Bank/Building Society for you)

DELIVERY: Goods will be despatched by post FREE OF CHARGE to UK Mainland addresses unless you request courier service (up to 25Kg) as follows: NEXT WORKING DAY...add £6 to order, TWO WORKING DAYS...add £5 THREE WORKING DAYS...add £4, SATURDAY DELIVERY...add £12 *(Merlin will ALWAYS despatch goods day of order unless otherwise discussed)*

WARRANTY: Goods that prove faulty within 30 days will be exchanged for NEW. After 30 days, and within 12 months from purchase (6 months for s/ware), faults will be rectified by the relevant manufacturers' repair agent and returned to you by courier. 'Sorcerors Seven' s/ware will ONLY be exchanged for the SAME TITLE; no refunds can be granted (...due to piracy of software by a minority who spoil things!)

COLLECTION: Merlin Express are predominantly a mail order company but we welcome customers to our trade/collection counter who wish to pick up goods from us. Why not pay us a visit, we will always be pleased to help you with your enquiries.

24 HOUR HOTLINE 0602 441442 Access VISA

MERLIN EXPRESS LIMITED

DEPT ACO/M8, UNIT C7, THE ROPEWALK INDUSTRIAL CENTRE, STATION ROAD, ILKESTON, DERBYSHIRE. DE7 5HX
TELEPHONE: 0602 441442 FAX: 0602 440141

FROM 4th NOV OPEN SAT & SUN 10am to 4pm...THAT'S THE MAGIC OF MERLIN!

E & O E

ALL our currently advertised offers supercede any previously advertised offer(s) and goods are NOT supplied on a trial basis.

AMIGA 500

NEW

S★C★R★E★E★N★★G★E★M★S

Pack.

ONLY £379.95

including:

Days of Thunder, Back to the Future II, Night Breed, Shadow of the Beast II & Deluxe Paint II.

Delivery on all items is free to UK addresses. All purchases of £1000 or more; earns a free Teddy Bear – "Cosmo"
All enquiries about Bears should be made to Cosmo in our Teddy Bear Department.

COMMODORE C286 PORTABLE

PC AT Portable 286 12.5 Mhz 1Mb ram 20Mb Hard Disc

£1999.95 inc VAT

X-COPY II

GLC would like to apologise but we have had to raise the price on this popular item.

£24.95

(X Copy is COSMO Approved)

Business Customers

Our Business Division can help you with all your computer needs. From Hardware to Software and Supplies

For more information and a credit account application, call 081-527-0405 and ask for Business Sales.



COSMO'S MESSAGE FOR THE MONTH

"Yo Dudes, Cosmo here again. Its that jingle bells time of year, so time you was out buying all your Christmas stuff from Mr Mike and the GLC crew.

And, dudes, you can meet me and the GLC crew at the Commodore Christmas Show on standy thing No. 37.

Ta Ta for now dudes"

Highams Park, Chingford, London. E4 9PT

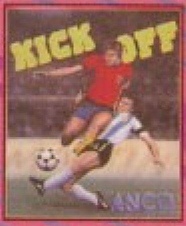
FAX 081-503-2341

Special Reserve NRG CYBERZINE

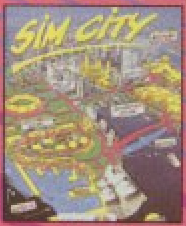
BIGGEST CLUBS
GREATEST DEALS
Over 2,000 products in our catalogue

SHOCKIN(G P…

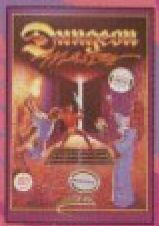
Over 30,000 …s in o…



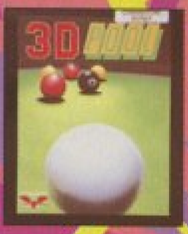
6.99



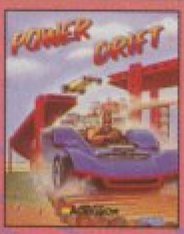
11.99



10.99



8.49



5.99



9.9…

SPECIAL RESERVE CLUB BENEFITS INCLUDE:

- ***NRG*** (Energy magazine) **N**ews, **R**eviews and **G**raphics. Screen shots, pack shots, charts, latest Giga-Savers. 40 colour reviews in every issue. Night City Cybertoon and the kill-or-die adventures of the Cyberpunk ***NRG*** street gang - It's Cyber-fantastic! ***NRG*** - bi-monthly to all Special Reserve members.
- ***Release Schedules,*** sent bi-monthly with updated catalogue information.
- ***Sales hotline***, to 8pm weekdays, 5-30pm Saturdays and 5pm Sundays. 0279 600204
- ***Fast despatch*** of stock items ***individually wrapped*** by ***first class post.***
- ***Written confirmations*** (receipts) sent when we receive each order.
- ***Catalogue, Membership Card & Folder*** for ***NRG***.
- ***Refunds*** or change of order on request if delayed.
- ***No Obligation*** to buy. We do not require a signed contract, nor is there any age requirement. With Special Reserve there are no hidden costs.

ANNUAL UK MEMBERSHIP £6.00
EEC £8.00 WORLD £10.00

Commodore Amiga

In stock at time of publication.



Amiga 500 Screen Gems Pack **359.99**

COMPUTER WITH MOUSE, TV MODULATOR, BACK TO THE FUTURE 2, DAYS OF THUNDER, BEAST 2, DELUXE PAINT 2 & NIGHTBREED.

Amiga Peripherals

PHILIPS 8833 COLOUR STEREO MONITOR	249.99
PHILIPS TELEVISION TUNER FOR 8833 MONITOR (CONVERTS THE MONITOR INTO A TELEVISION)	49.99
AMIGA A590 20 MEG HARD DRIVE	354.99
CUMANA EXTERNAL 3.5" 880K DISK DRIVE	79.99
AMIGA A501 RAM UPGRADE TO 1 MEG (GENUINE COMMODORE ITEM WITH CLOCK)	99.99
ZYDEC RAM UPGRADE TO 1 MEG WITH CLOCK	49.99
ZYDEC RAM UPGRADE TO 1 MEG	44.99
MONITOR STAND, WIRE FRAME, ACCESS TO DRIVE	19.99
NAKSHA MOUSE, BRACKET AND MAT (AMIGA OR ST)	32.99
MIDI MASTER AMIGA MIDI INTERFACE	32.99
COVER FOR AMIGA	5.49
COVER FOR MONITOR	5.99
KIND WORDS 2 (WORD PROCESSOR)	31.99

Disks 'n bits



SONY
3.5" DS/DD DISK + LABEL
GG413
65p each

PLASIC STORAGE BOX, HOLDS TEN 3.5" DISKS	1.30
3.5" SONY HIGH DENSITY DISK (1.4 MB)	1.39
10 PACK TDK 48 TPI 5.25" DS/DD DISKS (360K)	6.49
10 PACK TDK HD 5.25" DISKS (1.4 MB)	9.99
10 PACK TDK 96 TPI 5.25" DS/DD DISKS (720K)	8.99
3" MAXELL CF2 DISK + LABEL FOR PCW	1.99
3.5" DISK HEAD CLEANER	2.99
DISK BOX 3.5" (100 CAP) DIVIDERS, LOCKABLE	10.99
DISK BOX 3.5" (40 CAP) DIVIDERS, LOCKABLE	7.49
DISK BOX 3.5" (80 CAP) DIVIDERS, LOCKABLE	8.49
DISK BOX, STACKABLE, 3.5" (90 CAP) DRAWER	13.99

AMIGA and ATARI ST Shockware

16 BIT	AMIGA	ST
3D POOL	8.49	8.49
688 ATTACK SUB	16.99	
ACCOLADE IN ACTION (BLUE ANGELS, 4TH 'N' INCHES, GRAND PRIX CIRCUIT, FAST BREAK)	19.49	19.49
ADIDAS CHAMPIONSHIP FOOTBALL	16.49	16.49
ALPHA WAVES	15.99	15.99
ALTERED BEAST	7.99	
AMOS (GAMES CREATOR)	29.99	
AMOS SPRITES 1000	10.99	
APPRENTICE	12.99	12.99
ARCHIPELAGOS	6.99	6.99
ARMOUR-GEDDON	16.49	16.49
ATOMIC ROBOKID	16.49	16.49
AUSTERLITZ (BATTLE OF)	11.99	
AWESOME	21.99	
BAAL	6.49	6.49
BACK TO THE FUTURE 2	16.49	16.49
BAD LANDS	16.49	16.49
BALANCE OF POWER	6.99	6.99
BALLISTIX	4.99	6.49
BALLYHOO (INFOCOM)	7.99	5.99
BARBARIAN 2 (PALACE)	7.99	
BARDS TALE 2	8.99	
BATMAN THE MOVIE	11.99	
BATTLE COMMAND	16.49	16.49
BATTLE OF BRITAIN	19.49	
BATTLE OF BRITAIN (D/S DRIVE)		19.49
BATTLE SQUADRON	8.49	
BATTLECHESS	16.49	16.49
BATTLEMASTER	17.99	15.49
BATTLESTORM	16.49	16.49
BEAST 2	21.99	
BETRAYAL	19.49	19.49
BEYOND ZORK (INFOCOM)	24.99	7.99
BILLY THE KID	16.99	16.99
BLACK CAULDRON	6.99	6.99
BLACK LAMP	6.49	
BLITZKRIEG - MAY 1940	15.99	15.99
BLOOD MONEY	7.49	7.49
BLOODWYCH	6.99	
BLOODWYCH + DATA DISK		8.99
BLOODWYCH DATA DISK	10.49	
BREACH 2		15.99
BREACH 2 (1 MEG)	15.99	
BRIDGE PLAYER 2150 GALACTICA	19.99	19.99
BUCK ROGERS (SSI)	19.99	
BUDOKAN	16.99	
CADAVER	16.49	16.49
CAPTIVE	15.49	15.49
CARRIER COMMAND	10.49	8.99
CARTHAGE	16.49	16.49
CHAMPION OF THE RAJ	16.49	16.49
CHAMPIONS OF KRYNN (1 MEG)	19.99	
CHAMPIONS OF KRYNN (SSI)		19.99
CHAOS STRIKES BACK		10.99
CHAOS STRIKES BACK (1 MEG)	15.99	
CHAOS STRIKES BACK EDITOR		10.99
CHASE H.Q	16.49	13.49
CHASE H.Q 2	16.49	16.49
CHESS CHAMPION 2175	19.99	19.99
CHESSMASTER 2000	8.99	
CHESSMASTER 2100	18.49	
CHRONOQUEST 2	8.49	
CHUCK YEAGER'S AFT 2.0	16.99	16.99
CLOUD KINGDOMS	6.99	6.99
CODENAME ICEMAN (1 MEG) (SIERRA)	24.99	24.99
COLONEL'S BEQUEST (1 MEG) (SIERRA)	24.99	24.99
COLORADO	16.49	16.49
CONFLICT EUROPE		5.99
CONQUEROR	15.49	15.49
CONQUESTS OF CAMELOT (1 MEG)	24.99	24.99
CORPORATION	14.99	14.99
CORRUPTION (M/SCROLLS)	6.99	6.99
CRACK DOWN	7.49	7.49
CRIMEWAVE	16.49	16.49
CURSE OF THE AZURE BOND (SSI)	19.99	19.99
CUTTHROATS (INFOCOM)	9.99	17.49
DAMOCLES	15.49	15.49
DAYS OF THUNDER	15.99	15.99
DEATH TRAP	15.49	15.49
DEJA VU	6.99	3.99
DELUXE MUSIC CONSTR SET	45.99	
DELUXE PAINT		34.99
DELUXE PAINT 3	49.99	
DELUXE VIDEO 3	62.99	
DICK TRACY	15.99	15.99
DISNEY ANIMATION STUDIO	59.99	59.99
DRAGON BREED	16.49	16.49
DRAGON WARS	16.49	
DRAGON'S LAIR		28.99
DRAGON'S LAIR (1 MEG)	28.99	
DRAGON'S LAIR 2	27.99	27.99
DRAGONFLIGHT	18.49	18.49
DRAGONS BREATH	8.99	8.99
DRAGONSTRIKE (SSI)	19.99	
DRAKKHEN	11.99	11.99
DUNGEON MASTER		10.99
DUNGEON MASTER (1 MEG)	10.99	
DUNGEON MASTER EDITOR	8.99	8.99
DYNASTY WARS	7.49	7.49
E-MOTION	6.99	6.99
E-SWAT	16.49	16.49
ELIMINATOR		3.49
ELITE	9.99	9.99
ELVIRA - MISTRESS OF THE DARK	19.99	19.99
ENCHANTER (INFOCOM)	18.99	
EPIC	16.99	16.99
ESCAPE FROM SINGE'S CASTLE	28.99	
ESCAPE F.T.P.O.T. ROBOT MONSTERS	13.49	13.49
EUROPEAN SUPER LEAGUE	15.99	15.99
EXTASE	13.99	13.99
EYE OF HORUS	5.49	5.49
F16 FALCON	12.99	10.99
F16 FALCON MISSION DISK 1	13.49	8.49
F16 FALCON MISSION DISK 2	12.99	12.99
F19 STEALTH FIGHTER	19.99	19.99
F29 RETALIATOR	16.49	16.49
FAST BREAK (VOLLEYBALL)	6.49	
FEDERATION OF FREE TRADERS		9.49
FERRARI FORMULA 1	8.99	8.99
FINAL BATTLE (PSS)	16.49	16.49
FIRE AND FORGET 2	16.49	16.49
FISH! (M/SCROLLS)	6.99	6.99
FLIGHT OF THE INTRUDER	18.99	18.99
FLIGHT SIMULATOR 2	22.99	22.99
FLIMBO'S QUEST	16.49	
FLIPIT & MAGNOSE	16.49	16.49
FLOOD	16.49	16.49
FOOTBALL MANAGER 2 + EXPANSION	10.99	10.99
FUN SCHOOL 2 (2-6)	8.49	
FUN SCHOOL 2 (6-8 or 8+)	7.49	
FUN SCHOOL 3 (2-5, 5-7 or 7+ YRS)	15.99	15.99
FUTURE CLASSICS	16.49	

16 BIT	AMIGA	ST
FUTURE WARS	16.49	16.49
GAUNTLET 2	8.99	8.99
GFA BASIC V3.0 COMPILER	22.49	22.49
GFA BASIC V3.0 INTERPRETER	36.99	36.99
GHOULS 'N' GHOSTS		10.99
GO PLAYER PROFESSIONAL	19.99	19.99
GOLD OF THE AZTECS	16.49	13.99
GOLD RUSH! (SIERRA)		6.99
GOLDEN AXE	16.49	16.49
GRAND PRIX CIRCUIT	6.99	
GRAVITY	6.99	8.99
GREG NORMAN'S GOLF	17.99	17.99
GUILD OF THIEVES (M/SCROLLS)	6.99	6.99
HARD DRIVIN		6.99
HARD DRIVIN' 2	15.99	15.99
HARPOON	19.49	
HILL STREET BLUES	16.49	16.49
HIT DISKS VOLUME 2 (MAJOR MOTION, LEATHERNECKS, TIME BANDIT, TANGLEWOOD)		7.99
HITCH HIKERS GUIDE (BUDGET)	8.99	8.99
HOLLYWOOD COLLECTION (ROBOCOP, GHOSTBUSTERS 2, INDIANA JONES, BATMAN THE MOVIE)	18.99	18.99
HOLLYWOOD HIJINX (INFOCOM)	17.49	7.49
HOME ACCOUNTS (DIGITA)	22.99	22.99
HOME OFFICE KIT (KIND WORDS 2.0, MAXI PLAN, INFO FILE, PAGESETTER, ARTISTS' CHOICE, CALEFONTS)	86.99	
HORROR ZOMBIES	16.49	16.49
HOUND OF SHADOW	8.99	8.99
HUNT FOR RED OCTOBER	8.99	8.99
HYBRIS	5.49	
IMMORTAL (1 MEG)	16.49	16.49
IMPERIUM	16.99	16.99
INDIANAPOLIS 500	16.49	
INFESTATION	15.99	14.49
INFIDEL (INFOCOM)	7.99	13.99
INTERNATIONAL 3D TENNIS	16.99	16.99
INTERNATIONAL SOCCER CHALNGE	16.49	16.49
ISHIDO	19.99	
IT CAME FROM THE DESERT		19.49
IT CAME FROM THE DESERT (1 MEG)	10.99	
I.C.F.T. DESERT DATA DISK (1 MEG)	10.99	
IVAN STEWARTS OFF-ROAD RACER	16.49	16.49
J. NICKLAUS GOLF	16.99	16.99
J. NICKLAUS VOL1 COURSES	9.99	
J. NICKLAUS VOL2 INT COURSES	9.99	
JAMES POND	16.49	16.49
JEWELS OF DARKNESS (LEVEL 9)		6.99
JINXTER (M/SCROLLS)	6.99	6.99
JUDGE DREDD	13.99	13.99
K-SPREAD 2.0 (SPREADSHEET)	42.99	
K-SPREAD 4.0 (SPREADSHEET)		85.99
KICK OFF	6.99	6.99
KICK OFF 2	12.99	12.99
KICK OFF EXPANSION DISK	7.99	7.99
KID GLOVES	7.99	16.99
KILLING GAME SHOW	16.99	
KIND WORDS 2.0 (W/PROCESSOR)	31.99	
KINGS QUEST 1, 2 & 3 (SIERRA)	22.99	22.99
KINGS QUEST 4 (1 MEG) (SIERRA)	21.99	21.99
KLAX	13.49	13.49
KNIGHT ORC (LEVEL 9)		4.99
KRISTAL	10.49	15.49
KULT	6.99	5.99
LANCELOT (LEVEL 9)	5.99	5.99
LEATHER GODDESSES (BUDGET)		8.99
LEATHER GODDESSES (INFOCOM)	16.99	
LEGEND OF FAERGHIL	17.99	17.99
LEGEND OF THE SWORD		4.99
LEISURE SUIT LARRY 1 (SIERRA)	19.49	19.49
LEISURE SUIT LARRY 2 (SIERRA)	15.99	11.99
LEISURE SUIT LARRY 3 (SIERRA)	24.99	24.99
LIGHT CORRIDOR	15.99	15.99
LOMBARD RAC RALLY	8.99	8.99
LOOM	19.49	19.49
LORDS OF THE RISING SUN	9.99	
LOTUS ESPRIT TURBO CHALLENGE	17.49	17.49
LURKING HORROR (INFOCOM)		5.99
M.U.D.S (MEAN UGLY DIRTY SPORT)	15.49	15.49
M1 TANK PLATOON	19.49	19.49
MAGIC FLY	16.49	16.49
MANHUNTER SAN FRANCISCO (SIERRA)		9.99
MEAN STREETS	16.49	16.49
MENACE	5.49	6.99
MICKEY MOUSE		5.99
MIDNIGHT RESISTANCE	16.49	16.49
MIDWINTER	19.99	19.99
MIGHT AND MAGIC 2	19.99	
MILLENIUM 2.2		6.99
MONTY PYTHONS FLYING CIRCUS	13.99	13.99
MURDER	16.49	13.99
MURDER IN SPACE	15.99	15.99
MYSTICAL	15.99	15.99
N.A.R.C	16.49	16.49
NAVY S.E.A.L.S	16.49	16.49
NEBULUS 2	16.49	16.49
NECRONOM	17.49	
NEUROMANCER	16.99	
NEVER MIND	6.49	6.49
NEW YORK WARRIORS	13.99	13.99
NEW ZEALAND STORY		13.49
NIGEL MANSELL'S GRAND PRIX	6.99	6.99
NIGHTBREED (ACTION)	16.49	16.49
NIGHTBREED (INTER-ACTIVE MOVIE)	16.99	16.99
NIGHTSHIFT	16.99	16.99
NITRO	16.99	16.99
NORTH AND SOUTH	10.99	10.99
NUCLEAR WAR		13.99
OPERATION HARRIER	16.49	16.49
OPERATION STEALTH	16.99	16.99
OPERATION THUNDERBOLT	16.49	13.49
OVERRUN	19.49	
PACLAND	6.99	8.49
PACMANIA	6.49	2.99
PAINTWORKS		4.99
PANG	16.49	13.99
PARADROID 90	16.49	16.49
PASSING SHOT (TENNIS)		5.99
PAWN (M/SCROLLS)	6.99	6.99
PHOTON PAINT	6.49	
PHOTON PAINT 2.0 (1 MEG)	49.99	
PIRATES	16.99	16.99
PLANETFALL (BUDGET)	8.99	8.99
PLAYER MANAGER	12.99	12.99
PLOTTING	16.99	16.99
POLICE QUEST 1 (SIERRA)	16.49	16.49
POLICE QUEST 2 (1 MEG) (SIERRA)	22.99	
POLICE QUEST 2 (SIERRA)		16.99
POOL OF RADIANCE (1 MEG) (SSI)	19.49	
POOL OF RADIANCE (SSI)		19.49
POPULOUS	16.49	16.49
POPULOUS PROMISED LANDS	8.99	8.99

16 BIT	AMIGA
POWERDRIFT	5.99
POWERDROME	8.99
POWERMONGER	18.99
PROJECTYLE	16.49
PROPHECY - VIKING CHILD	16.49
PROTEXT WORD PROCESSOR	64.99
PUBLISHERS CHOICE DTP (1 MEG)	59.99
PURPLE SATURN DAY	5.99
PUZZNIC	16.99
QUEST FOR GLORY (1 MEG)	22.99
QUESTRON 2 (SSI)	
R-TYPE	
RAINBOW ISLAND	16.49
RAMROD	17.49
REACH FOR THE SKIES (PSS)	19.49
RED LIGHTNING (SSI)	
RED STORM RISING	16.99
RICK DANGEROUS 2	16.49
RIDERS OF ROHAN	19.49
ROBOCOP 2	15.99
ROCKET RANGER	9.99
ROGUE TROOPER	16.99
RORKE'S DRIFT	15.99
S.T.U.N RUNNER	16.49
SCRABBLE DE LUXE	13.49
SEASTALKER (INFOCOM)	11.99
SECOND FRONT	19.49
SECRET AGENT SLY SPY	16.49
SECRET OF MONKEY ISLAND	16.99
SHADOW OF THE BEAST	9.99
SHADOW WARRIORS	16.49
SHADOWGATE	
SHOCKWAVE	16.49
SHOGUN (INFOCOM)	18.99
SHOOT 'EM-UP CONSTR' KIT	7.99
SILENT SERVICE (SUB SIM)	8.49
SIM CITY	11.99
SIM CITY TERRAIN EDITOR	10.49
SIMULCRA	16.49
SKYCHASE	5.99
SKYFOX	4.99
SNOWSTRIKE	16.49
SORCERER (INFOCOM)	
SPACE ACE	27.99
SPACE HARRIER 2	6.99
SPACE QUEST 3 (SIERRA)	22.99
SPACE ROGUE	17.99
SPEEDBALL 2	15.99
SPELLBOUND	13.49
SPELLBREAKER (INFOCOM)	13.99
SPY WHO LOVED ME	16.49
ST ADVENTURE CREATOR	
STAR RAY	
STARCROSS (INFOCOM)	13.99
STARFLIGHT	16.99
STARGLIDER	6.49
STARGLIDER 2	
STATIONFALL (INFOCOM)	
STORM ACROSS EUROPE (SSI)	19.49
STOS (GAMES CREATOR)	
STOS COMPILER	
STREET HOCKEY	16.49
STRIDER 2	16.49
SUBBUTEO	15.99
SUPER GRIDRUNNER	8.49
SUPER HANG ON	8.99
SUPER WONDERBOY	
SUPERBASE PERSONAL 2 (DATABASE)	69.99
SUPERPLAN (1 MEG SPREADSHEET)	69.99
SUPREMACY	19.49
SWORD OF SODAN	9.99
SWORDS OF TWILIGHT	8.99
T.N.T (APB, HARD DRIVIN', TOOBIN, DRAGON SPIRIT, XYBOTS)	19.49
TEAM YANKEE	19.49
TEENAGE MUTANT HERO TURTLES	15.99
THE KEEP	16.99
THE LOST PATROL	16.49
THEME PARK MYSTERY	
THREE STOOGES (CINEMAWARE)	6.99
THUNDERBIRDS	4.99
THUNDERSTRIKE	16.99
TIME MACHINE	16.99
TIMES OF LORE	6.99
TIMEWORKS DESK TOP PUBLISHER	
TOKI	16.49
TORVAK THE WARRIOR	16.49
TOTAL RECALL	15.99
TREASURE TRAP	15.99
TRIAD VOL2 (MENACE, BAAL, TETRIS)	7.99
TRIVIAL PURSUIT	
TURBO CUP	4.99
TURBO CUP (WITH CAR)	
TURBO SILVER GRAPHIC/ANIMATION	106.49
TURRICAN	12.99
TV SPORTS (U.S) FOOTBALL	11.99
TV SPORTS BASKETBALL	11.99
ULTIMA 5	18.49
ULTIMATE RIDE	15.99
UMS - UNIVERSAL MILITARY SIM	7.99
UMS 2 - UNIVERSAL MILITARY SIM 2	19.99
UN SQUADRON	16.49
UNINVITED	
VAXINE	16.49
VENUS - THE FLY TRAP	14.49
VETTE (CORVETTE)	18.99
VIRUS	6.49
VOODOO NIGHTMARE	16.49
VOYAGER	6.99
WATERLOO	10.49
WELLTRIS	15.99
WHEELS OF FIRE (HARD DRIVIN, POWER-DRIFT, CHASE H.Q, TURBO OUTRUN)	19.99
WHIRLIGIG	
WINGS (1 MEG) (CINEMAWARE)	18.99
WINGS OF FURY	16.49
WIPE OUT	10.99
WISHBRINGER (BUDGET)	8.99
WISHBRINGER (INFOCOM)	
WITNESS (INFOCOM)	9.99
WOLFPACK	
WOLFPACK (1 MEG)	19.49
WONDERLAND (1 MEG) (M/SCROLLS)	19.99
WORKBENCH 1.3	13.99
WORLD CUP SOCCER - ITALIA 90	12.99
WORLD CUP SOCCER (1 MEG)	13.49
WRATH OF THE DEMON	18.99
X-OUT	12.99
XENOMORPH	15.99
XENON 2, MEGABLAST	7.99
XIPHOS	15.99
ZORK 1 (INFOCOM)	9.99
ZORK 2 (INFOCOM)	
ZORK TRILOGY (INFOCOM)	

IN PRICES

30,000 m...s in our clubs

ADVENTURE MADNESS **SALE**

Over 40,000 games in our warehouse



9.99 7.99 7.99 9.99 6.99 9.99 6.99

Nintendo Gameboy

fficial UK Version. Free Shockware holster worth £7.99.



***Gameboy** + Tetris, two player lead, tereo headphones and batteries plus FREE Special Reserve membership or Shockware holster* **69.99**

Gameboy Software etc. (MORE SOON)

EYWAY	15.99	SUPER MARIO LAND	15.99
LF	15.99	TENNIS	15.99
	15.99	SHOCKWARE GAMEBOY	
LAR STRIKER	15.99	HOLSTER WITH BELT	7.99

Atari Lynx

Official UK Version. In stock at time of publication.

***ynx** colour handheld system + mains powerpack & California Games* **159.99**

Lynx Software

BARRAGE	27.49	GAUNTLET 3	27.49
E LIGHTNING	21.99	KLAX	27.49
PS CHALLENGE	21.99	MS PACMAN	27.49
CTRO COP	21.99	PAPERBOY	27.49
TES OF ZENDECON	21.99	RAMPAGE	27.49

Sega Megadrive

Official UK Version. Free extra Joypad and membership.



***Megadrive** + Altered Beast + Joypad + extra TURBO Joypad FREE + FREE Special Reserve membership* **189.99**

Megadrive Software

ALEX KIDD IN THE ENCHANTED CASTLE	23.99	REVENGE OF SHINOBI	27.49
ARNOLD PALMER GOLF	27.49	SPACE HARRIER 2	27.49
FORGOTTEN WORLDS	27.49	SUPER HANG ON	27.49
GHOULS N GHOSTS	34.49	SUPER LEAGUE BASEBALL	27.49
GOLDEN AXE	27.49	SUPER THUNDERBLADE	27.49
LAST BATTLE	27.49	THUNDERFORCE 2	27.49
MYSTIC DEFENDER	27.49	TRUXTON	27.49
RAMBO 3	23.99	WORLD CUP ITALIA 90	23.99
		ZOOM	23.99

POWER BASE CONVERTER (Runs Master System Games) 28.49
TURBO (FAST FIRE) JOYPAD 17.49
SEGA MEGADRIVE ARCADE POWER STICK 34.99

INEVITABLY, SOME GAMES SHOWN MAY NOT YET BE RELEASED.
Inter-Mediates Ltd. Reg. Office: 2 South Block, The Maltings, Sawbridgeworth, Herts CM21 9PG. VAT reg. no. 424 8532 51

Sega Master System

Official UK Version. Free Special Reserve membership.



GA MASTER SYSTEM,TWO JOYPADS, HANG ON 79.99
GA MASTER PLUS SYSTEM WITH LIGHT ASER GUN, HANG ON & MARKSMAN GAMES 99.99
REE SPECIAL RESERVE MEMBERSHIP WHEN YOU BUY EITHER F THE ABOVE SYSTEMS (EXISTING MEMBERS DEDUCT £6.00)
ICKJOY SG JETFIGHTER MASTER SYSTEM JOYSTICK...13.99

Sega Master Software

ACTION FIGHTER	11.99	INDIANA JONES	22.99
AFTERBURNER	22.99	MONOPOLY	22.99
ALEX KIDD	19.99	NINJA	9.99
ALEX KIDD HIGH TECH WORLD	22.99	OPERATION WOLF	22.99
ALEX KIDD SHINOBI WORLD	22.99	OUTRUN	22.99
ALEX KIDD LOST STARS	22.99	PAPERBOY	22.99
AMERICAN BASEBALL	22.99	PARLOUR GAMES	14.99
AMERICAN PRO FOOTBALL	22.99	PRO WRESTLING	22.99
AZTEC ADVENTURE	11.99	R-TYPE	22.99
BOMBER RAID	22.99	RAMBO 3	22.99
CALIFORNIA GAMES	22.99	RASTAN	22.95
CASINO GAMES	22.99	RESCUE MISSION	22.99
CHASE HQ	22.99	ROCKY	9.99
CYBORG HUNTER	19.99	SECRET COMMAND	22.99
DOUBLE DRAGON	22.99	SHINOBI	11.99
DYNAMITE DUX	22.99	SUPER MONACO G/PRIX	22.99
ENDURO RACER	9.99	SUPER TENNIS	22.99
F16 FIGHTER	14.99	TEDDY BOY	9.99
GAUNTLET	22.99	TENNIS ACE	9.99
GHOSTBUSTERS	22.99	TRANSBOT	22.99
GOLDEN AXE	22.99	ULTIMA 4	9.99
GOLFAMANIA	25.49	WONDERBOY	29.99
GREAT BASKETBALL	19.99	WONDERBOY 3	19.99
GREAT GOLF	19.99	WORLD SOCCER	22.99
IMPOSSIBLE MISSION	22.99	ZILLION 2	19.99
			23.99

SEGA MASTER CONTROL STICK 14.99
SEGA MASTER HANDLE CONTROLLER (YOKE) 34.99
SEGA MASTER LIGHT PHASER GUN 29.99
SEGA MASTER LIGHT PHASER GUN WITH TRAP SHOOTING, MARKSMAN SHOOTING AND SAFARI HUNT 44.99
SEGA MASTER RAPID FIRE UNIT 7.99
SEGA MASTER SG COMMANDER CONTROL PAD 9.99

Joysticks, Mice etc.

UK Postage included, EEC add 10%, World add 25%.



ack Row (left to right)

ickshot 123 15 pin analogue for IBM PC 12.99
ickjoy M5 15 pin joystick for IBM PC 18.49
ickjoy Superboard (ST, AMIGA ETC) 18.49
ickjoy Jet Fighter (ST, AMIGA ETC) 14.99
ickjoy Supercharger (ST, AMIGA ETC) 12.95

ront Row

mpetition Pro Extra autofire (ST, AMIGA ETC) 12.49
tty C400A1 IBM Serial Mouse plus software........32.99
ksha Mouse and Mat For Amiga or ST 32.99
nix Megablaster (ST, AMIGA ETC)........5.99

Amiga/ST Joysticks etc. not shown.

COMPETITION PRO 5000 BLACK 10.99
COMPETITION PRO 5000 MEAN GREEN 10.99
COMPETITION PRO 5000 RED/WHITE 9.99
COMPETITION PRO 5000 WHITE 10.99
COMPETITION PRO EXTRA COMBAT 12.99
COMPETITION PRO EXTRA GLO GREEN 12.99
COMPETITION PRO EXTRA GLO RED 12.99
EUROMAX PROFESSIONAL COMPETITION 9000 ....11.49
KONIX NAVIGATOR JOYSTICK AUTOFIRE 12.99
KONIX SPEEDKING JOYSTICK AUTOFIRE 11.99
QUICKJOY INFRA-RED JOYSTICK 33.99
MOUSE MAT (QUALITY SOFT MAT) 4.99
POPULOUS/FALCON LEAD (NULL MODEM CABLE) 8.99
FOUR PLAYER AMIGA/ATARI ST JOYSTICK ADAPTOR (FOR KICK OFF 2, LEATHERNECKS, GAUNTLET 2 AND TV SPORTS BASKETBALL FITS PRINTER PORT) 7.99

IBM PC Joysticks etc. not shown.

CHAMP JS 606 IBM XT/AT ANALOG AUTO JOYSTICK 15.49
COMPETITION PRO PC STYLE (IBM) 12.99
DYNAMICS IBM GAMES CARD WITH TWIN JOYSTICK PORT INTERFACE (9 PIN) 19.99
EUROMAX IBM ANALOGUE 3001 JOYSTICK 12.99
KONIX AMSTRAD/IBM PC GAMES CARD WITH TWIN PORT INTERFACE 7.99
KONIX SPEEDKING IBM JOYSTICK 15.99
QUICKSHOT QS-120 DELUXE IBM GAMES CARD 15.99

OR JOIN EUROPES BIGGEST ADVENTURE CLUB

OFFICIAL SECRETS

FOR ADVENTURES AND ROLE PLAYING AND MORE

All the benefits of Special Reserve plus:

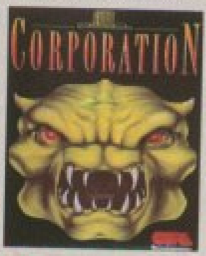


- ***Confidential.***

Our 32 page bi-monthly magazine is essential reading for those interested in adventures or role-playing games. Written by experts, *Confidential* has covered everything from How to Host a Murder to Which F16 Flight Simulator? Our agents, led by the Master Spy known as "The Boss Upstairs", seek out the secrets of RPG's, FRP's, MUG's, PBM's, Leisure Suit Larry, The Russians, Elvira..... and more.

- ***Sim City or Corporation .***

Choose one free for Atari ST, Amiga or IBM. Please phone if you have a different machine.



Of *Corporation*, **ACE said:** "Probably the most influential game of this genre making this an essential addition to your collection. **Zero said:** If you liked Dungeon Master you'll lurve this.
Of *Sim City*, **ACE said:** "Sim City is a politician's - or a gamesplayer's - dream... comparisons spring immediately to mind with Populous... but Sim City seems to have much more depth....". **C&VG said:** "Sim City is utterly fab"

- ***Help-Line - to help you solve most games.***

Manned weekdays until 8pm and on Sundays (not an 0898 number)

- ***Myth - exclusive to Official Secrets members.***



Written by Magnetic Scrolls, authors of Wonderland, *Myth* is a mini adventure set in Ancient Greece. In it you'll meet The Ferryman, cheat Death and face the nine-headed Hydra. *Myth* includes the famous Magnetic Scrolls parser and graphics and is included in the price of membership.

Amiga Format said: "An excellent adventure... witty, cunning and just plain good fun! If you liked Fish! you'll probably like this, because they're very similar in style: you may even prefer *Myth*, it's that good!"

Myth Ratings: **CU 90%, Amiga Format 87%, TGM 85%, Crash 91%**

Official Secrets Annual UK Membership With 6 issues of Confidential, Myth, Corporation or Sim City, Help-Line + membership of Special Reserve. **29.99**

EEC membership £34.99. WORLD Membership £39.99.

SALES LINES 0279 600204

WE ONLY SUPPLY MEMBERS BUT YOU CAN ORDER AS YOU JOIN
THERE IS A SURCHARGE OF 50P PER GAME FOR TELEPHONED ORDERS
(PLEASE PRINT IN BLOCK CAPITALS)

Name & Address ____________________

Post Code ________ Tel. ________

Computer ________ *5.25"/*3.5"/*3.0"/*TAPE

Payable to:

Special Reserve or Official Secrets
P.O. Box 847, Harlow, CM21 9PH

Existing members please enter your Membership No. ________

Special Reserve £6 UK, £8 EEC, £10 World or
Official Secrets £29.99 UK, £34.99 EEC, £39.99 World

Corporation and Myth ☐ or with Sim City and Myth ☐ AMCOMP6

PLEASE ENTER MEMBERSHIP FEE £

Item ________ £

Item ________ £

Item ________ £

Item ________ £

Software Prices include UK or EEC Postage. World software orders please add £1.00 per item. For non-software items such as joysticks or blank disks please add 10% EEC or 25% World for carriage. Overseas orders must be paid by credit card. £

Credit card expiry date ________

*CHEQUE/*POSTAL ORDER/*ACCESS/*VISA

SOFTMACHINE

Hardware

A500 Screen Gems
Back to the Future II
Days of Thunder
Shadow of the Beast II
Nightbreed
Deluxe Paint II
£369.99

A 500 Flight of Fantasy
F29 Retaliator
Rainbow Islands
Escape from the Planet of the Robot Monsters
Deluxe Paint II
£369.99

Amiga 500 First Steps
A501 Ram Expansion
Deluxe Paint II + Print II
Pro Write + Info File
Let's Spell at Home
Amiga Logo + Talking Turtle
Mouse Mat + 10 Blank Disks
£539.99

Commodore Amiga 1500
Amiga 1500 c/w 1Mb Ram
1084S Colour Monitor
Platinum WORKS!
Deluxe Paint III
Populous, Battlechess,
Sim City, Their Finest Hour,
A-Z of Computer Jargon,
Getting the most from your Amiga
£1059.99

Softmachine Powerpack
Tower of Babel
Shufflepack Cafe
Microprose Soccer
Grand Monster Slam
E-Motion, Kid Gloves
RVF Honda, Powerplay
Datastorm, Dungeon Quest
ONLY £25*

Softmachine Starter Pack
Deluxe Mouse Mat
Tailored Dust Cover
Drive Head Cleaner
10 TDK MF2DD Disks
80 Cap Lockable Disc Storage Box
ONLY £20*

*When purchased with any Amiga computer...Offer limited to 1 Starter/Power pack per Amiga purchased

Peripherals

A500 Batman Pack	£369.99
A500 Class of the 90's	£539.99
1084S Colour Monitor	£259.99
A1011 Disk Drive	£89.99
A590 20Mb Hard Drive	£279.99
A501 Ram Exp/Clock	£59.99
A520 Modulator	£24.99
A1352 Mouse	£34.99
Philips 8833 Monitor	£244.99
Cumana 1Mb 3.5" Drive	£69.99
Cumana 5.25" Drive	£104.99
0.5 Mb Ram Exp/Clock	£39.99
Hitachi Camera + lens	£219.99
Digiview 4	£112.50
Vidi Amiga	£97.50
Colourpic	£434.99
Type 10 Handy Scanner	£254.99
Minigen	£97.50
Rendale 8802 Genlock	£187.50
Cherry A3 Tablet	£479.99
Podscat 12" x 12" tablet	£196.99
Designer Modem	£104.99
Pro 4 Modem	£399.99
Linnet Modem	£144.99
Linnet 1200 Modem	£244.99
Linnet 2400 Modem	£359.99
WS 4000 Modem	£164.99
Midi Master Interface	£29.99
Phantom SMPTE/Midi	£209.99
Omega Midi Interface	£19.99
A.M.A.S.	£79.99
Futuresound	£74.99
Mastersound	£34.99
Contriver Mouse	£22.50
Optical Mouse	£34.99
10 x Sony Bulk 3.5"	£6.99
10 x Sony MFD2 DD	£10.99
10 x TDK MF2DD 3.5"	£12.99
3.5" 40 Cap Lockable Box	£5.99
3.5" 80 Cap Lockable Box	£7.99
3.5" 150 Cap Posso Box	£19.99
Printer Cable	£4.99
3.5" Head Cleaner	£3.99
Mouse Mat with Amiga Logo	£5.99

Books

Advanced Amiga Basic	£18.95
*Adv Sys Prog Guide.	£32.45
* 3D Graph Prog Basic	£18.45
Amiga Applications	£16.95
* Assembly Lang Prog.	£14.45
Amiga Basic Inside & Out	£18.95
Amiga C for Adv. Prog.	£32.45
Amiga C for Beginners	£18.45
Amiga DOS	£14.95
Amiga DOS Inside & Out	£18.45
Amiga DOS Quick Ref	£8.95
Amiga DOS Ref. Gde	£14.95
Amiga Desktop Video	£18.45
Amiga Desktop Video Gde	£18.45
* Disk Drives Inside & Out	£27.95
Amiga for Beginners	£12.95
*Gde Gra./Sound /Comm.	£17.45
Graphics Inside + Out	£32.45
* Hardware. Ref. Manual	£21.95
Amiga Mach. Lang. Guide	£21.95
Amiga Machine Lang.	£14.95
*Microsoft Bas. Prog. Gde	£18.45
*Prog. Handbook. Vol. 1	£24.95
*Prog Handbook Vol 2	£23.95
Amiga Prog Gde Compute	£17.45
Amiga Prog Gde Weber	£20.45
*ROM Kernel Ref Man Inc	£28.95
*ROM Kernel Ref Man Lib	£29.95
Amiga Sys Prog Guide	£32.95
Amiga Tricks and Tips	£14.95
Becoming an Amiga artist	£18.45
Beginners guide to Amiga	£16.95
Computes 1st Book of *	£16.95
Computes 2nd Book of *	£16.95
Elementary Amiga Basic	£14.95
Inside Amiga Graphics	£16.95
Inside the Amiga with C	£24.50
Kids and the Amiga	£15.95
Mapping the Amiga	£20.95
Prog Guide to Amiga	£23.95

* Indicates Amiga in Title

Language/Compilers/Etc

AMOS	£35.95
A-Rexx	£32.50
Argasm	£42.50
Aztec C Developer	£199.95
Aztec C Professional	£112.95
Benchmark Modula 2	£137.50
Benchmark Libraries	£72.50
Devpac 2	£43.50
GFA Basic v3.5 Compiler	£22.95
GFA Basic v3.5 Interpreter	£39.95
Hisoft Basic	£56.95
Hisoft Extend	£15.95
K-Seka Assembler	£34.95
Lattice C V5	£174.95
Lattice C++	£259.95

Utilities

B.A.D.	£32.50
B.B.C. Emulator	£39.95
Calligrapher	£67.95
Disk Master	£39.95
Dos2 Dos	£29.95
Cross Dos V4	£28.95
Gomf V.3	£27.95
Power windows V2.5	£54.95
Project D	£29.95
Quarterback	£39.95
Superback	£41.95
X-Copy + Hardware	£28.95

CAD/Graphics/Animation

3D Professional	£394.95
Animagic	£54.95
Broadcast Titler	£184.95
Can do	£101.95
Comic Setter	£39.95
Comic Setter Clip Art	£17.50
Deluxe Paint III	£59.95
Deluxe Photolab	£54.95
Deluxe Print II	£36.95
Deluxe Video III	£74.95
Design 3D	£62.95
Digi Paint 3	£54.95
Disney Animation Studio	£81.50
Fantavision	£32.50
Imagine	RING
IntroCAD Plus	£81.50
Movie Setter	£39.95
Page Flipper + F/X	£69.95
Page Render 3D	£81.50
Photon Paint 2	£29.95
PIXmate	£39.95
Professional Draw V.2	£104.95
Pro Video Post	£215.95
Spectracolour	RING
The Director	£47.50
The Director's Toolkit	£27.50
TV Show V2	£57.50
TV Text Prof	£104.95
Video Generic Master	£54.95
Video Titler 3D	RING
Video Wipe Master	£54.95
X-CAD Designer	£86.95
Zoetrope	£74.95

Desktop Publishing

G.D. Type Decorative	£32.50
G.D. Type Designer	£32.50
G.D. Type Publisher	£32.50
G.D. Type Video	£32.50
Gold Disk Office	£104.95
Pagesetter V2	£49.95
Pagestream	£127.95
Pagestream v2	£142.50
Professional Page v2	RING
Professional Page V1.3	£159.95
PP Outline fonts	£104.95
PP Structured Clip Art	£35.95
PP Templates	£35.95
Proclips	£20.95

Music

Audiomaster III	£57.50
Bars and Pipes	£184.95
Deluxe Music	£54.95
DR. T's Copyist App	£72.50
DR. T's Copyist DTP	£184.95
Dr T's KCS	£229.95
Dr T's MRS	£47.50
Dr T's Tiger Cub	£79.95
Instant Music	£19.95
Music X	£74.95
Music X v1.1	£89.95
Pro 24	£265.95
Quartet	£35.95
Sonix	£49.95

Communications

GP Term	£57.50
K-Comm 2	£34.95
Ruby Comm	£54.95

Accounts

Cashbook Combo	£49.50
Cashbook Controller	£34.95
Final Accounts	£21.95
Home Accounts	£21.95
Small Business Acc. Cash	£56.50
Small Business Acc. Xtra	£79.95
System 3	£34.95

Word Processing

Excellence 2	£132.50
Kind Words 2	£35.95
Pen Pal	£104.95
Protext v5	£102.50
Pro Write V.3	£102.50
Scribble Platinum	£41.50
Transwrite	£32.50
Word Perfect	£176.95

Databases

Acquisition 1.3	£169.95
K-Data	£34.95
Prodata	£56.95
Superbase Personal	£27.50
Superbase Personal 2	£69.95
Superbase Professional	£169.95

Spreadsheets

Advantage	£79.95
DGCalc	£27.95
K-Spread 2	£42.50
Superplan	£69.95

Educational

Designasaurus	£32.50
Distant Suns	£52.95
Fun School Under 6	£14.95
Fun School 2 6-8 years	£14.95
Fun School 2 Over 8	£14.95
Fun School 3 Under 8 yrs	£17.95
Fun School 3 5-7 years	£17.95
Fun School 3 Over 7	£17.95
Mega Maths GCSE	£20.95
Micro English GCSE	£20.95
Micro French GCSE	£20.95
Micro Maths GCSE	£20.95
Play and Read	£20.95
Primary Maths	£20.95
Spell at Home	£15.95
Spell at The Shops	£15.95
Spell Book 4-6 years	£15.95
Spell Book 7+	£15.95
Things to do with Numbers	£15.95
Things to do with Words	£15.95
World Atlas	£44.95

Printers

DOT MATRIX	
Epson LX400	£169.99
Epson LQ400	£249.99
Epson LX850	£244.99
Epson LQ550	£334.99
Seikosha SP-2000	£174.99
Seikosha SL-92AI	£284.99
Citizen 120D + P	£134.99
Citizen 124D	£219.99
Citizen Swift 9	£199.99
Citizen Swift 24	£294.99
Swift Colour Kit	£35.00
Panasonic KXP1180	£169.99
Panasonic KXP1124	£274.99
Star LC-10	£169.99
Star LC-10 Colour	£214.99
Star LC24-10	£249.99
INK/BUBBLE JET	
Epson SQ850	£599.99
Epson SQ2550	£829.99
HP Deskjet 500	£499.99
HP Paintjet	£899.99
Canon PJ1080A	£584.99
Canon BJ130E	£549.99
LASER	
Epson EPL7100	£929.99
HP Laserjet IIP	£899.99
Canon LBP 4	£934.99

Please ring for prices/availability on any hardware/software/peripherals not listed. (Full price list on request)

Please make cheques/postal orders payable to SOFTMACHINE. All items subject to availability.
All prices include V.A.T. & U.K. Delivery. All prices subject to change without notice. E.&O.E.

Access

SOFTMACHINE

Dept. AC12, 20 Bridge House, Bridge Street, Sunderland SR1 1TE. Telephone: 091-385 7426

VISA

GAMES CENTRE

688 Attack Sub	£16.99
Adidas Champ Football	£16.99
Adidas Tie Break	£16.99
All Dogs Go To Heaven	£24.99
All time Favourites	£19.99
Amtago	£13.99
Anarchy	£13.99
Anthead Desert Disk	£10.99
Apprentice	£13.99
Astate	£13.99
Atomix	£13.99
Awesome	£24.99
Back to the Future II	£16.99
Bar Games	£16.99
Battlemaster	£16.99
Beast II	£24.99
Betrayal	£16.99
Blockout	£13.99
Bloodwych + Datadisk	£16.99
Blue Angels	£16.99
Bomber Mission Disk	£10.99
Breach 2	£16.99
BSS Jane Seymour	£16.99
Budokan	£16.99
Castle Master	£16.99
Chess Champion 2175	£19.99
Chess Simulator	£16.99
Chronoquest 2	£19.99
Codename Iceman	£27.99
Colonels Bequest	£27.99
Colony	£19.99
Colorado	£16.99
Combo Racer	£16.99
Corporation	£16.99
Crackdown	£16.99
Cyberball	£13.99
Damocles	£16.99
Dan Dare 3	£13.99
Datastorm	£13.99
Days of Thunder	£16.99
Debut	£16.99
Defenders of the Earth	£13.99
Distant Armies	£16.99
Dragons Breath	£19.99
Dragon Force	£19.99
Dragon Strike	£19.99
Dynasty Wars	£16.99
E-Motion	£16.99
Emlyn Hughes Int Soccer	£16.99
Escape/Robot Monsters	£13.99
F19 Stealth Fighter	£19.99
Falcon + Mission Disk 1	£24.99
Falcon Mission Disk 2	£13.99
Final Battle	£16.99
Final Countdown	£16.99
Fire & Brimstone	£16.99
Fire & Forget 2	£16.99
Flight Simulator 2	£24.99
Flimbos Quest	£16.99
Flood	£16.99
Frontline	£16.99
Future Dreams	£16.99
Ghosts 'N' Goblins	£13.99
Gold of the Aztecs	£16.99
Grand National	£13.99
Gravity	£16.99
Gremlins 2	£16.99
Hammerfist	£16.99
Hardball 2	£16.99
Harley Davidson	£19.99
Herewith The Clues	£16.99
Heroes	£19.99
Highway Patrol 2	£16.99
Immortal	£16.99
Imperium	£16.99
Impossamole	£13.99
International 3D Tennis	£16.99
Int. Champ Wrestling	£16.99
Italy 1990	£13.99
Jumping Jackson	£13.99
Khalaan	£16.99
Kick Off 2	£13.99
Killing Game Show	£16.99
Klax	£13.99
Knights of Crystallion	£19.99
Last Ninja II	£16.99
Loom	£19.99
Mad Prof. Moriarti	£13.99
Magic Fly	£16.99
Manix	£16.99
Matrix Marauder	£13.99
Midnight Resistance	£16.99
Midwinter	£19.99
Might and Magic II	£19.99
New York Warriors	£13.99
Nightbreed	£16.99
Ninja Spirit	£16.99
Nuclear War	£16.99
Operation Stealth	£16.99
Oriental Games	£16.99
Overlander	£13.99
Paradroid 90	£16.99
Phantasie 3	£16.99
Photon Storm	£13.99
Pipe Mania	£16.99
Pirates	£16.99
Plague	£16.99
Player Manager	£13.99
Pool of Radiance	£19.99
Powerboat	£16.99
Power Up	£13.99
Projectyle	£16.99
Puffy's Sega	£16.99
Punisher	£16.99
Pyramax	£13.99
Red Storm Rising	£16.99
Resolution 101	£16.99
Rotox	£16.99
Rorkes Drift	£16.99
Rotor	£13.99
Second Front	£19.99
Secret Agent/Sly Spy	£16.99
Shadow Warriors	£16.99
Shockwaves	£16.99
Sir Fred	£16.99
Sorcerers Apprentice	£13.99
Space Rogue	£19.99
Spy Who Loved Me	£13.99
Starblade	£16.99
Storm Across Europe	£19.99
Subbuteo	£16.99
Supreme Flight Command	£19.99
Sword of Aragon	£19.99
TNT	£19.99
TV Sports Basketball	£19.99
Teenage Mutant Turtles	£19.99
Tennis Cup	£16.99
Their Finest Hour	£19.99
Theme Park	£16.99
Third Courier	£16.99
Thunderstrike	£16.99
Time Machine	£16.99
Time Soldiers	£16.99
Tower of Babel	£16.99
Toyottes	£13.99
Treasure Trap	£16.99
Treble Champions	£13.99
Triad 3	£19.99
Turn It	£13.99
Turrican	£13.99
Ultima 5	£19.99
Unreal	£19.99
Venom Wing	£13.99
Venus Fly Trap	£13.99
War Head	£16.99
Welltriss	£16.99
Wings	£19.99
Wings of Fury	£16.99
World Boxing Manager	£13.99
World Cup Compilation	£16.99
World Cup Italia '90	£13.99
Xenomorph	£16.99
Yolanda	£13.99
Zombie	£16.99

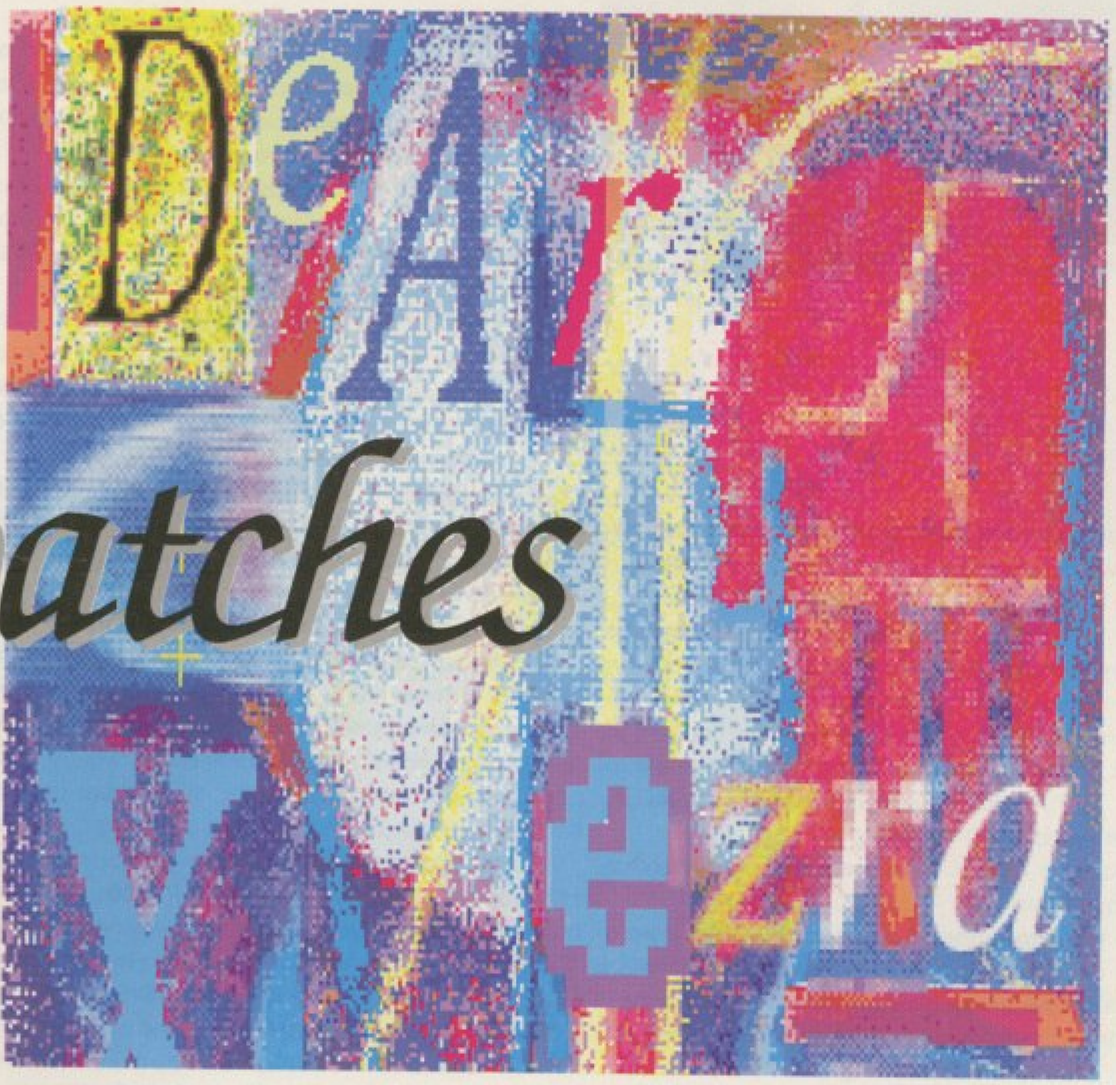
Please phone for latest releases new titles arriving daily

Please make cheques/postal orders payable to SOFTMACHINE. All items subject to availability.
All prices include V.A.T. & U.K. Delivery. All prices subject to change without notice. E.&O.E.

Access

SOFTMACHINE Dept. AC12, 20 Bridge House, Bridge Street, Sunderland SR1 1TE. Telephone: 091-385 7426

VISA



Despatches

Write to Ezra Surf
Amiga Computing
Europa House
Adlington Park
Macclesfield
SK10 4NP

Code in the head

I AM well into assembly language, in that now I have started to learn how to program in it. I won't be giving it up until I'm coding "scrollies" with the best of them.

Somehow it agrees with me, whereas C did just the opposite. I'm even enjoying it in a rather masochistic way.

I would be grateful if you would answer these queries (even though you shouldn't talk to queries) :

1. Can you recommend a book which will go through the fundamentals of the language again to refresh my memory, but then go on to handling the screen quickly? If this is not possible with one book, how about recommending a couple of good ones then?
2. Has AmC ever printed an assembly tutorial in its hallowed pages? (I owned one of those nasty ST things until recently, so I've not been buying AmC for very long.)
3. Which assembler do you advise me to spend my pennies on?

Thank you for reading, and I hope in answering these questions for me. Other would - be coders will benefit too.

P.S. I whole-heartedly agree with Duncan about KO11 and Damocles. At last the truth is told...

William Rae Ashington, Northumberland.

Well now, if you check out the machine code piece in the Almanac section this month you will see that Jolyon, our resident guru on matters codelike, has in fact reviewed such a book.

Jolyon also tapped out a large number of features in the past and will be continuing to do so in the Almanac section.

As to assemblers, well basically there are three contenders, Argasm (which is fast), Devpac (which is good) and A68k (which is free).

All major stockists should have Argasm and Devpac – take a look through the ads. A68k is the official standard for the Amiga, it should be available from all worthwhile Pd libraries and BBSs.

Organised chaos

IN the past I have been able to gain a great deal of help from this section of the magazine, so I am hoping you can help me now with a specific problem.

I purchased my Amiga because, as I am sure you will agree, it is the best computer. It has now grown to 1 meg plus a second drive and all is great, except that I also have a Psion organiser and the 128k data pack is getting full and needs tidying. I understand that the K Comms communications pack will allow my Psion and the Amiga to talk, but I can't find anywhere to buy the lead to connect the two.

The official Psion/IBM lead is available but it comes complete with software for the IBM, which I don't need ,and is naturally expensive.

Will the K Comms pack be suitable? And where can I get a lead to connect between the Amiga and the Psion?

P. Neal, South Woodford, London .

Hmmm. I see your grief. Well, absolutely any comms package will work – the lead is the only problem. It may be easier to make your own.

A serial link will normally only use two lines,so it's really just a question of finding the pin-out details for the Psion.

Are any details included with the Psion? Does anyone out there know off-hand what they are?

Makin' tracks

I AM considering a business in the computer vinyl cutting field, and as far as I can see I have three options.

1. To use the Amiga as it is with the appropriate hardware and software. The trouble is finding the software and hardware that is specifically designed for the purpose of vinyl cutting.
2. To buy the necessary equipment so that my Amiga can emulate an IBM compatible. I know there is existing available software and hardware for the IBM.
3. To buy the A-Max 2 to emulate the Apple



Despatches

Macintosh, but I have know idea about the software and hardware options available for the Mac.

As the situation stands I would prefer either options 1 or 2, as I know both these systems very well.

Also, if you could help me, could you please tell where I could buy all this equipment whichever system you decide to recommend.

J.Gregson, Hockering, Norwich.

Hmmm. I don't know of any software/hardware for either the Mac or the PC that would do this (although if someone wants to write in and surprise me, go ahead). So maybe PCs are useful for something.

In that case you are in luck. In this very issue is a review of a cheap and friendly PC emulator from KCS. I'd give them a ring first to check compatibility with the software that you are considering.

If they can't help you another PC emulator is to be launched real soon – the AT Once. If you read next month's mag you should get a full review.

Font fault

WITH reference to page 59 of the October 1990 issue and the section "How to make it work", having made room on my working disc as suggested, I then copied over the fonts from my Workbench 1.3 in order to use them to give myself a change.

Not finding a fonts directory, I tried placing it in the following places: As located in the Workbench and Dpaint 2 , in the Pagesetter drawer, in the CGFonts drawer But the demo would not show them in the typeface menu.
Is it possible for them to be used with this demo? If so, can you tell me how, in easy steps, as I am still learning how to use the Amiga.

I almost forgot to say what a great demo Pagesetter is. I am really tempted to buy the real thing.

R. E. Golding, Werrington, Peterborough, Cambs

Ooops. If booting off the Pagesetter disk (which you should be) the fonts should be located in a directory called "fonts". In fact, there isn't one on the disk ,so you'll have to make one. From the CLI just type "makedir cd013:fonts". Now you can copy across all the fonts you want.

I should hope you do want to buy PagesetterII - it's jolly good and I'm not just saying that. You might like to know that you can now get it for just £52.95 from Silica Shop (071-580 4000).

Mobile printouts

TO take better advantage of the excellent output of Compugraphic fonts used with Pagesetter II I have recently upgraded my 24 pin Panasonic to a Hewlett Packard Deskjet Plus, which means I can print the Compugraphic fonts to a resolution of 300 dpi instead of 180 dpi.

This is the real reason for my letter. Using the HP Deskjet driver in Preferences I soon discovered that although the first graphic dump after switch-on was correctly positioned at the top of the page, all subsequent printouts were 1/2in lower, as the printer fed this amount of paper just before printing.

After many phone calls to Hewlett Packard and Hi-Voltage, from whom I purchased the printer (none of whom could offer any help or did not want to know mainly because they had no knowledge of the Amiga) I eventually realised that the problem lay with the perforation skip commands embedded in the Preferences driver. Using Filezap I managed to edit the driver so that the driver turns off the perforation skip so that every graphic printout starts in the same place on the page.

If any of your readers has an Amiga driving a HP Deskjet Plus and would like a copy of the modified driver, I would be pleased to send them a copy on receipt of a disk and return postage etc.

John Farrar, Elm Cottage, 2 Marsh Lane, Hayle, Cornwall TR27 4PS.

Great. thanks a lot for that tip. There are a few happier Deskjet owners out there now.

While we're on the subject of Gold Disk, I'd just like to take this opportunity to say that the editor got it wrong.

The price of Pro Page 2.0 will actually be 395 dollars and so will be around £250 in this country.

The distribution of Gold Disk software is now spread among Gem, SDL and Precision Software as well as HB, with more to follow in the future.

Disk disaster!

ABOUT six months ago I bought an A590 hard drive. It worked perfectly, so after three months of untroubled use I decided to add 2 megs of fast ram to the drive.

The installation process looked easy (I had already fitted a 1.3 rom successfully), so I decided to do the job myself. I reckoned that if anything was going to go wrong with the drive it would have done so within the first few months, so I took the chance and voided the warranty.

Everything was great, there I was with a perfectly working A590 and 3 Mb of ram the envy of all my friends. That is until a month ago ,when the drive started misbehaving.

I decided to give Commodore a ring and ask their advice. They told me that they no longer ran a technical service for users and that I should contact my dealer.

It was then that I discovered that the dealer had gone out of business. Being a member of ICPUG I wrote to their chairman for help. He kindly gave me the address of Commodore's accredited repair company.

Meanwhile I faxed Commodore hoping they would help (that was four weeks ago and I'm still waiting after three further phone calls).

I was informed by the repair company that the standard cost of A590 repairs was £109.25. The problem is that if I go ahead and send the drive for repairs, I may find that the fault lies with my computer and waste money and time. So what do I do?

In the hope that you may be able to help, the fault is as follows: On power up the drive fan works OK, but the drive itself doesn't spin. Instead it makes an awful clicking noise which varies between 2 - 15 minutes. Obviously, it doesn't auto-boot either. When the drive does eventually 'fire up' I usually find that a number of blocks have errors, specifically on the cylinder the heads are parked.

I hope you are able to help as I'm getting very frustrated. The moral of this story is: Don't buy from small dealers, and don't play with things that are under warranty.

Jim Campey, Brentford, Middlesex.

It does sound a bit like there's a problem with the drive. Did you try removing the ram again? Have you tested any other drive or peripheral on the expansion port? Don't worry about further damage to the drive, it looks like it's going away for repairs anyway.

It seems odd that the drive should start misbehaving in this way suddenly. On bootup does the screen stay white while the drive is being accessed? This would seem to indicate that auto-configure was not taking place (remember that the ram must auto-configure as well).

Part of the problem could be down to power supplies. I know that the A590 has its own, but when ram is added – especially that much – there is a further drain on the supply. It depends what type of chips you use.

Demo trouble II

I HAVE just spent a very frustrating hour and a half attempting to get the Pagesetter 2 demo to work.

First, the readme.pp file does not open and disgorge its contents when clicking the icon in Workbench. I attempted to read it by using the TYPE and ED commands in CLI, but was told it contained binary code and couldn't be read.

Clearly it is not written in Ascii code and is not a .DOC type which can normally be read using those commands. So what am I doing



Despatches

wrong ?

Second, when clicking the PS 2 demo icon, after a period of disc drive activity, I get a requester to Please insert volume CGFonts: in any drive.

Choosing the IGNORE option, I get a second requester stating No fonts available on directories FONTS or CGFonts ! Choosing the RESUME option merely returns me to the WB screen.

Incidentally, a tip for your other readers. You can delete a directory in one go even if it contains other files. Simply enter the command DELETE DIRNAME ? ALL where DIRNAME is the name of the directory you wish to delete.

Finally, there's an error in you article on DPaint on page 94. The 3rd column, 2nd full paragraph states "For nearly all occasions it will be a 256 by 320 screen display". Unfortunately, there is no option for a 256 x 320 screen, only a 320 x 200 as shown on the print of the format: screen at the bottom of page 95. (I assume you were referring to Lo - Res).

K.L.Richards, Tockington, Bristol.

Right. Firstly your problem with the doc file is due to it not being an Ascii text file. It was once, but then to save space it was crunched using Powerpacker. Clicking on the icon will activate PPmore, a file reader that will read the text while it is still packed.

The reason this wouldn't work for you is because you have to boot up on the demo disk. Otherwise Amigados will look in the C: directory on your Workbench disk and so will be unable to find PPmore.

Secondly. Boot up on the demo disk! The startup-sequence contains the assigns required to tell PSII where to find the scaleable font. So there you go. It is always worthwhile looking through the c: directory on the coverdisk to find all sorts of goodies that Jeff has left there.

Lastly. Ok, guilty. It should have read 320 x 256, which is the size of a PAL lo-res screen.

Doubtful disks

SORRY to have tocomplain, but I feel I must take you lot to task. I do like the magazine, it is informative, well produced and gives up-to-the-minute information, and is reasonably well balanced (though I would like to see a little more serious computing information, especially for the less experienced "computer maniacs").

But I have a gripe - yes ,you guessed it ! THE COVER DISC!!

Now I do think it is a good idea, but if it is going to be produced, why, oh why isn't it done properly ? We have had an Amiga for nearly two years and it started out as a games machine for my two lads.

But we discovered Amiga Computing and gradually I got interested in it, and now we are getting to see how useful all those nice utilities you put on the disk could be. Problem is, very few of them work !

The kids copied the games from the discs (and usually they were OK) and the cover disc was stowed away in the disc box. I now am trying to use such gems as PPShow or Powerpacker, only to find on loading, that "Error occurred on loading Error code 212" comes up more often than not.

It even happened on this month's cover disc on the two Amos programs !! (Wacky Wabbits worked OK though !)

The last straw was when I looked back to August 89 disc to use disksalve and diskchecker. The programs did not even appear to be on the disc.

I followed instructions from the magazine on using the utilities but diskchecker or disksalve are unknown commands as far as our Amiga is concerned. When I look at the Workbench Icons only the Docs seem to be there.

I know we could return the discs to the suppliers but why should we be without them for a couple of months (or lose them altogether if some of your other correspondents' experiences are anything to go by).

Might I suggest a little more quality control on the production of the master discs would be in order. If this is not economic then I suggest that either the idea be shelved and we go back to paying £1.90 or whatever for the magazine, or you charge us a little more and we have something that we can use.

Sorry to be critical, but we long-suffering consumers often have to put up with second class devices and non-serviceable goods in the name of the great god economy.

Mr Upset, Southcote, Reading

Well, first off, the Amos programs are to be used in conjunction with Amos, so they won't actually run from Workbench just by clicking the icons. The icons are there just to make it easier to copy the files off to a working disk.

We go to quite unbelievable lengths to make sure that the disks we send out do work. We test the actual programs to make sure they work on all the machines in the office with all sorts of combinations of memory and Workbench versions.

Some of the programs that require extra files and a bit of setting up (like the PagesetterII demo for example) have a lot of files in the C: directory of the disk and perhaps some extra lines in the startup-sequence to make them work.

Normally there is extensive documentation to allow you to set up the system the way you like, but this may require some undertanding at your end.

That's why it is a good idea to make back-up copies of the disk and delete unwanted files to make room rather than trying to copy everything onto another disk. Because of this you may experience problems if you don't boot off the cover disk.

The case of the missing files is down to you. Either the disk was faulty (which is quite unlikely) or you have accidentally deleted them. They were definitely on the disk,as tens of thousands of other users can testify.

Doing a deal

I LIVE in the Netherlands and I have something to say. First I want to excuse myself for my bad English, I hope you can read it.

I want to say that you guys are making a really good magazine. In the Netherlands we have only 1one Dutch magazine and it comes only six times a year.

I want to ask you a question. How can I order something in the UK ? They say with a money order, postal order or a sterling cheque. But I don't know what all of that is. Can you explain to me how I can do it ?

I went to London (nice city), to buy my copy of AMOS. I write AMOS with capitols because it is a super great program. It was not yet for sale in the Netherlands. The Netherlands is always a step behind.

M.Haveman, Ardennenlaan 23, 1966 RS
Heemskerk ,Nederland.

Thanks for the nice comments. If you want to order something from a company here (and it depends on the company) you have quite a few choices.

To start with, you can get a Eurocheque book from your bank. This means you can write a cheque valid for any currency in Europe..The bank will also be able to help you with an International Money Order, which basically means they will convert your money into a cheque in the currency of your choice.

The easiest way is to use a credit card - either yours or someone else's (though it might be nice if you asked them first). Access, Visa, Barclaycard, American Express - they're all good for most places, but give them a ring first.

Basic blues

I AM currently studying A level computer studies and have just started my final year. I will soon have to start my project, but will have to program it on an Educational Standard RM Nimbus. Due to the size of the project and its importance to my final grade I was wanting to find a way to run RM Basic on my Amiga 500. I have written to a few other magazines (all to no avail) requesting information on any emulators capable of running RM Basic.

I do not wish to buy a hardware emulator such as KCS power board because I will probably have no need for PC emulation after my project is complete and secondly I can't afford it.

What I hope to do is load RM Basic at school on the Nimbus and work on my project and then save the program onto an MSdos

formatted disk. Then load an emulator at home on my Amy and continue to work on the same program.

I have 1Mb of ram, a second 3.5 drive and a Star LC-10 colour printer. Would the emulator be able to use the second drive and the printer? A person I know (I won't say friend because he owns as ST) has a Transformer, but I don't have any information on it and want to know if it will work before I buy it.

Robert Downs. Blackpool, Lancs.

Not being too familiar with RMBasic I reckon it is pretty much like any other Basic. If you don't want to use cunning graphics and suchlike you may get away with just running the programs from Amiga Basic. In that case all you need to do is get hold of Dos2Dos, CrossDos or MessyDos to transfer the files from PC disks.

The Transformer does work some of the time. Try getting to know this bloke better, that's my advice. He can certainly let you know whether your software will run on it.

Remember, remember

I want to reply to Simon Champion's letter in the September issue of Amiga Computing about a recommended ram expansion. First, I wonder why someone who is willing to pay for an A1500 seems unwilling to spend money on an expansion. For me, the expansion is a necessity. The A1500 – a luxury.

To answer the real question, Mr.Champion, the best thing you can do is to search the magazine for ads of memory expansions. But to save you the trouble I did just that and came up with the following recommendation: Buy a half mag expansion, which costs £40 or less, and then, when you find out that it's too little, go to Diamond and use their part exchange scheme to change this into an 8M expansion populated to 2Mb for just £99. It's cheap and expandable.

To be honest, I recommend that you don't even buy the 512k expansion.

It's too restrictive Remember, when I bought my A501 two years ago, it cost me £140, and now for the same price you can get 2Mb.

Eyal, Jerusalem, Israel

Polyglot printers

I HAVE some questions for you:

1. I use a Star LC-10 colour printer. When I print a picture the printouts are almost always stripey. Each line seems to be overlapped by one pixel. How do I correct the spacing to solve this problem?

I have read the 1.3 manual, but to no avail. I use the EpsonX printer driver, and I have tried all the Star LC-10 drivers on the August cover disk. The stripes are still there.

2. Your article in the September issue about wordprocessors was very interesting. However, I still have a question: Is there a wordprocessor that will allow me to send escape sequences to the printer? I was thinking about ProWrite or Pen Pal, because of the possibility to use the Amiga fonts and IFF graphics in a document, but the article said nothing about the possibility of sending escape sequences.

Before I got my Amiga 2000 I used an Amstrad CPC6128, and I used the wordprocessor Tasword. With Tasword, it was easy to send any codes to the printer.

3. Is there a PD program that will convert a IFF HAM picture to a "normal" 32 colour picture (or 64 when using extra Halfbrite) ? If you know about such a program, I would like to know where I could get it.

4. I have recently bought a disc full of fonts from a PD library. The problem is that none of them include international characters.

As I am a Norwegian, the Norwegian characters (*) are especially important. Do you know about such a font disk?

Rolf Nordeide,
Ostre Hopsvei, 46 N-5043 HOP, Norway.

The lines may be something to do with the micro-spacing of the carriage. Some printers allow you to adjust this. Look up the manual.

I don't think you are going to have any luck trying to find a wordpro with graphics capability that will allow you to send escape codes (though I'm welcome to be proved wrong). You'd be much better off getting PagesetterII. There are plenty of picture manipulation programs. Pixmate is excellent, as is The Art Department, but neither of those are PD.

A while back George Thompson Services put together a collection of such software on a couple of disks. Give them a ring on 077082-234. They may be be able to help with the font problem too.

Oh what a Circus

Recently I bought a copy of Hisoft's Devpac Two from a computer store in Oxford Street, London. I paid £9.95 for it. When I returned home ta few days later, I tried to load the package into my Amiga and found that Disk One did not work.

When I checked the disk I found it to contain no data at all – as if it was an unformatted blank disk. I returned the package to the shop where I bought it by registered post, clearly explaining that I would like my money back, and ordered the piece of software from a (much cheaper) mail order company.

After a telephone call, during which the manager of the store admitted that the software was faulty, they refused to let me have my money back, but in turn offered me a credit note.

I wrote back to him to say this was unacceptable to me, because I could not afford to have nearly £60 of my money tied up in this way. This was more than four weeks ago and as yet I have heard nothing further from them.

Oliver Stockley, Kingsway, Shipston-on-stour, Warwickshire

It sounds as if you are definitely entitled to your money back. Unfortunately being legally in the right does not always help in these matters as quite a few shops will try to pull the wool over your eyes.

I'll give 'em a bell and try and get it sorted. If the threat of being no longer on Ezra's Christmas list doesn't stun them into submission then you need help. Pop along to your local Citizens 'Advice Bureau. They will be able to provide you with legal aid which may not cost you a penny.

Duncan dares too much

As the developer of the game Lost Patrol for Ocean, I read the review of our game in the current issue of Amiga Computing with great interest.

That Duncan Evans thought the game poor is of no consequence. Of course tastes are subjective and his was the first bad review out of 12 European magazines.

But we do object most strongly to his final assertion that any reviewer who said the game was a good one was a liar, lying to maintain Ocean's advertising revenue.

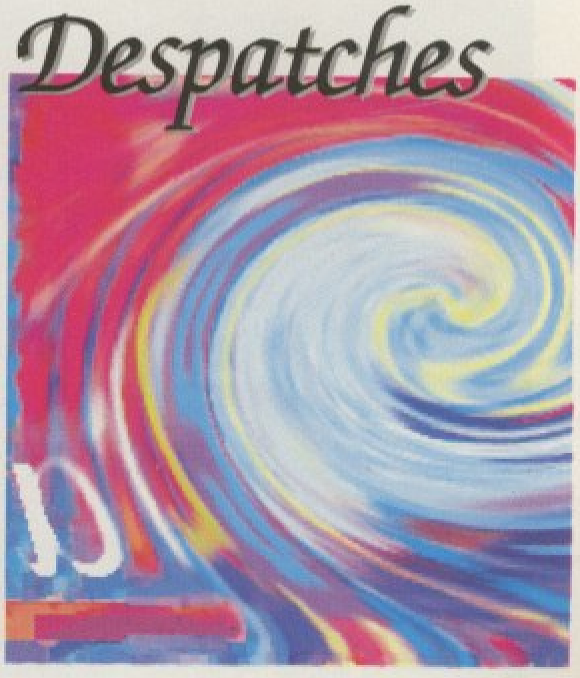
We find this statement unjust, irresponsable and totally unfounded, and now feel that a printed retraction is in order with the reviewer concerned disciplined.

Is Mr. Evans also calling his fellow journalists on your Amiga Action magazine liars for their good review of the game? Perhaps this young man has an axe to grind with Ocean themselves? If this is the case then even his reviews can no longer be held as objective.

I. G. Harling, Envision, Bristol

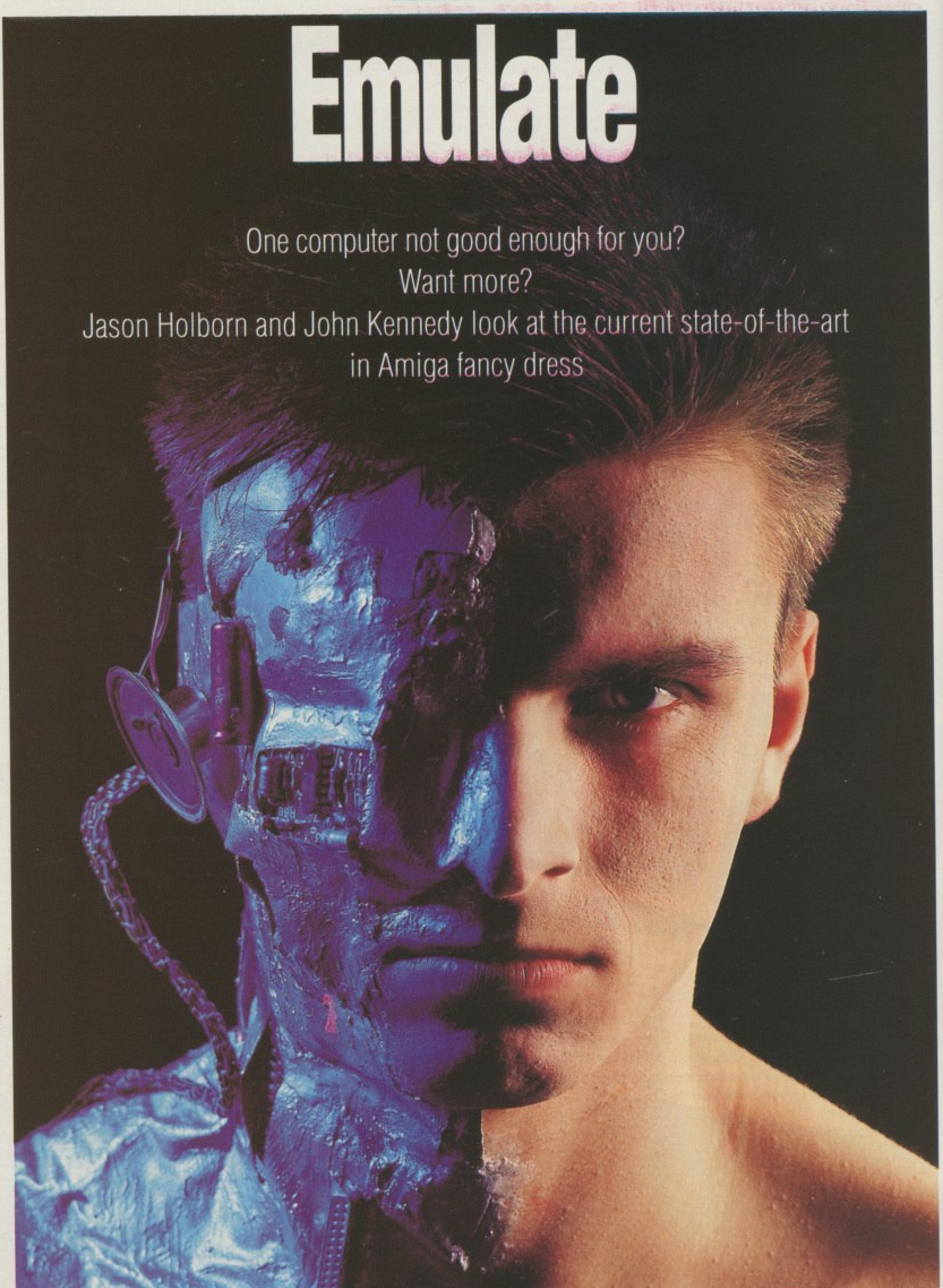
Well, yes. I'd have to agree with you there. Duncan can get a bit carried away sometimes (though not far enough for most people's liking). I have spoken to Duncan since and he regrets having cast aspirtions as to the integrity of the journalistic fraternity.

While it is not our intention here at *Amiga Computing* to muzzle our reviewers when it comes to giving a game a poor review we regret that Duncan went too far in this case.



Emulate

One computer not good enough for you?
Want more?
Jason Holborn and John Kennedy look at the current state-of-the-art in Amiga fancy dress



Some people are never satisfied. One computer per family just isn't enough in these decadent times: Not only do they want an Amiga, they want a PC, an Apple and an Atari.

Emulation provides a solution to the problem of becoming buried under a mountain of different makes of hardware. Thanks to a combination of software and hardware, your Amiga can play "Let's pretend" and be any computer you want it to be.

In theory at least, emulating another computer is easy. All you need is the correct processor (a 68000 for the Mac and ST: already present in the Amiga, a 8080-compatible for PCs) and a copy of the operating system.

Then you just tie up a few loose ends, such as input from the keyboard and output to the screen, and any legally written programs will work fine.

The main problem is getting hold of the operating system of the computer to be copied. Since it is usually held in rom, it's normally only a matter of either using the roms themselves, or making a disk image of them and using that.

There is a small snag here: It may be illegal. Whoever wrote the operating system holds the copyright, and they may go so far as to only license you to use it. This means there are only certain circumstances in which you can use it, and copying it on to a floppy for a friend certainly won't be one of them.

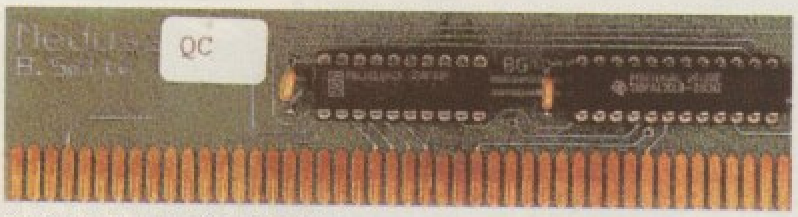
This sort of legal battle has long been assigned to the filing cabinets for the PC's operating system. A solution was reached by getting a third party to re-write the OS and using it. To the user both systems are the same and his IBM clone will run the vast majority of IBM PC based software.

It is hard to imagine a third party company writing a new version of the Mac or Atari ST operating systems.

Kick STart

Being the Amiga's closest cousin, the Atari ST should be the easiest computer to emulate. After all, they both share the same 68000 processor. In fact it would be fair to say that if you took away the Amiga's custom chips, the hardware architecture of the two machines is almost identical, so it shouldn't be too hard to get Atari software running on an Amiga

When the Amiga first arrived, there was talk of an ST emulator for just £5, but that (not surprisingly) never arrived. However, a German company called Macro Systems have recently come up with the goods in the shape of their Medusa ST emulator.



The hardware component of Medusa

The emulator package consists of two disks (one of which is in Atari format) and a tiny PCB containing little more than a couple of chips and a capacitor. The card, which slots internally inside the A2000, is the smallest emulator card I've ever seen – if you're not careful, it would be all too easy to lose it under a pile of disks: It really is seriously small.

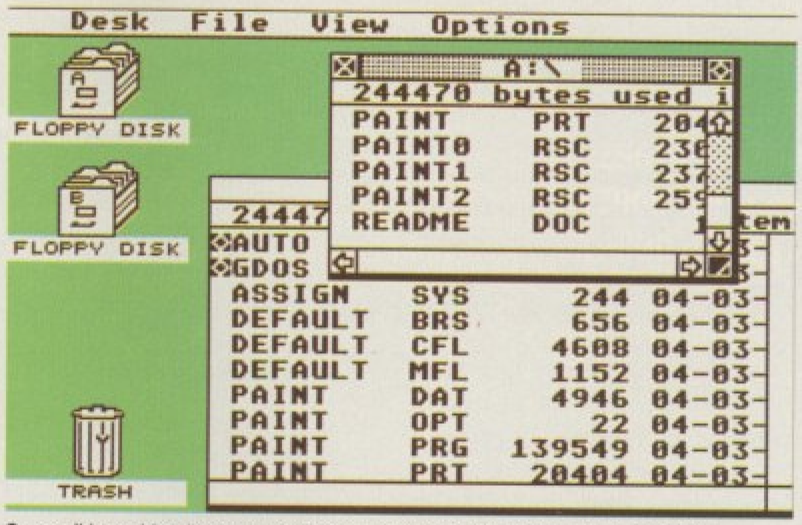
Then again, the card itself isn't that important for Medusa claim that the hard work of emulating the Atari is actually handled by the Amiga itself – the card is used for nothing more than I/O.

The card won't multi-task, and this is really a great shame as it would have been a perfect way of winding up all those ST-owning friends you may have. Seriously though, Macro Systems claim that the next release (version 2) will be fully multi-tasking, so it will be possible to run ST and Amiga packages concurrently.

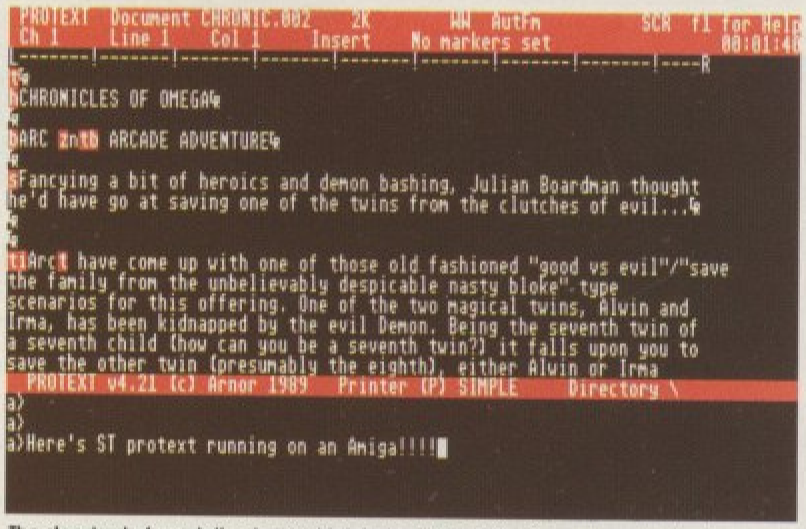
In use, the Medusa card isn't a simple plug in and go affair. Before you even get the slightest glimpse on anything even remotely ST-like, you'll have to swallow your pride and get your hands on a real ST.

On the Atari format disk that came with the emulator is a rather suspect little utility called GETTOS.PRG. This program, which must be run on a real Atari, dumps the Atari rom to disk as a 200k binary file and copies it on to the Medusa boot disk.

In theory, this should allow Medusa to emulate anything from the very first ST machines (which came with the operating system *TOS* on disk) to Stacys and STEs boasting Rainbow TOS version 1.6. Surprisingly, although you could run Rainbow TOS, you can't get at any of the extra facilities offered by the STE. Why this should be I don't know, as the Amiga hardware could more than adequately handle the task.



Once all is working fine, you should be greeted by the rather garish ST desktop.



The standard of emulation is very high indeed: This is the ST version of Protext.

Now all you have to do is double click on the Medusa icon and things start to happen. From now on, you've got a machine that is, to all intents and purposes, an Atari ST. It can read and write disks in Atari format and, for hard disk users, you can even set up a partition on your drive for Atari software.

Unlike a real Atari, it's actually possible to run all three Atari screen modes from a standard Amiga monitor (Atari owners need two monitors!). Both medium and low resolution are virtually identical to a real ST, but the ST high resolution mono mode does tend to suffer from the usual eye-straining qualities associated with interlaced displays.

It would have been nice if the emulator supported the non-interlaced screen modes offered by the new enhanced chip set. As it is, you're either going to have to buy yourself a flicker fixer, or cross your fingers and hope that Macro Systems fix this in version 2.

Due to restrictions in the ST's memory management, it is only possible for a real ST to access a total of 4Mb of ram. Atari botched things by only allowing a 22 bit address bus even though the 68000 can actually handle up to 16Mb using a 24 bit bus. This is one area where the emulator actually improves upon the real thing: Medusa can take full advantage of the Amiga's entire memory map. If you've got the memory, you could have a 9Mb ST!

According to Medusa, the emulator runs at about 90-95 percent of the speed of a real Atari, which isn't bad (and is in fact a little impossible) when you consider that the Amiga normally runs 10 per cent slower than an Atari.

Surprisingly, Medusa seems to run most application software without a hitch. Even ST MIDI software (which is written to use the Atari's built-in MIDI ports) works fine. The emulation software re-directs all MIDI activity to serial-based Amiga MIDI interfaces, therefore allowing you to run software such as Cubase without a hitch.

If you need to run Atari applications software, then Medusa certainly delivers the goods. It happily

runs programs such as Calamus, Pro-24, Harlekin, GFA BASIC and even the ST version of Protext.

However, that's not to say that the Medusa system will run all Atari software: If you're hoping to run any of your friends ST games under the emulator, then forget it. Due to disk protection schemes and blatant "metal bashing", the vast majority of Atari games software almost certainly won't work. This isn't a handicap: Any games which come out for the ST and not the Amiga aren't worth playing!

There is only one problem with Macro's emulator – and that's the price. Coming in at £180, the emulator certainly isn't cheap. For that kind of money, you could quite easily pick up a real ST. However, if you can't afford the desk space taken up by an additional machine, then the Medusa emulator provides a simple (and space saving) solution.



Even the ST version of DPaint ran without problems!

Mac attack

I don't know what it is, but there's something about the Macintosh that makes it highly desirable. Take your average computer buff. Although he may not readily admit it, there's a Mac lover in there somewhere. He may wibble on endlessly about the merits of his chosen computer, but it's a sure bet that he would much rather be sat in front of a Mac.

So why haven't we all got Macs sitting on our desktops next to our Amigas? Well unfortunately, Apple has the habit of pricing products out of the reach of the people that most want them. An averagely well endowed Mac could set you back almost £3000 – even then, you have to fork out extra for things like high resolution colour cards. This then, is why A-Max is such a good bet.

ReadySoft's A-Max Mac emulator has been around for a fair old time now. Unfortunately, the original release was rather limited – if you wanted to play Mac Tetris (which is about all I used it for) then it was fine. But for serious DTP work, it left a lot to be desired.

Everything seemed fine with A-Max, but for one small detail – hard disk support. If you've ever used a floppy disk-based Mac then you'll already know how frustrating it can be. The Amiga suffers enough with the dreaded disk swapping syndrome, but with the Mac it's an accepted fact of life. Mac users complained of aching wrists after prolonged periods of use, hence the term Macintosh Elbow.

Thankfully, ReadySoft have cured this problem with the release of A-Max II. If you're the lucky owner of a hard disk, you can now use it to store Mac programs and data. Is A-Max now perfect?

If you've bought the basic A-Max II (not the Plus version) then the first thing you'll notice is that the hardware itself hasn't changed from the original A-Max. That same long and rather obtrusive grey box is still as obtrusive as ever. It protrudes out of the back of the machine a good 6 inches or so, as if trying to compete with Commodore's TV modulator to see which can get in the way the most.

If you haven't had chance to play with A-Max, then it's worth saying a few words about the cartridge itself. Contained within that beautifully moulded case (which, incidentally, has the signatures of the designers etched on the inside) are two chip holders. These holders seat the two Mac roms that must be installed for A-Max to be able to do its stuff.

Mac roms come in two flavours – 64k and 128k. Roms from the Mac II will not work – these are high capacity 256k Roms. If you can, go for 128k Roms as this will allow your A-Max II system to run a higher percentage of Mac software. After initial problems obtaining these Roms, EI can now supply them for an additional fee. Actually installing the roms is a simple enough task which is completed in a matter of minutes.

There's also a number of extra connectors. The first is a pass-through connector which will allow you to use your external drives even when A-Max is in use. If your drive has a passthrough connector, it's even possible to plug the A-Max cartridge into that, therefore saving you the hassle of having to fight through all the spaghetti growing out of the back of your machine every time you wish to unplug A-Max.

For those of you who can afford such a luxury, it's also possible to plug a Macintosh disk drive into your Amiga via the A-Max cartridge. Although these are generally rather more expensive than their Amiga counterparts, such a drive is a worthwhile investment if you intend using A-Max seriously. A good drive to go for is the Amiga-A-Tosh drive which is available from MAST on 077082 212.

It's just not fair. If, like me, you like to dive in and start playing as soon as you get a new piece of kit, then you're in for a big disappointment; Before A-Max II can do its stuff, there's a fair bit of setting up to be carried out.

The first thing to do is to find a Mac and copy the Mac System and Finder files onto a special mini-transfer disk. This A-Max II specific disk can be read by both the Mac and by A-Max. Unfortunately, it's rather limited in size – a mere 272k!

If you're using a Mac that has a large number of fonts and desk accessories installed, you'll probably have to remove a large number of them before both Finder and System will fit onto the mini-transfer disk. Don't worry – as soon as you've got A-Max up and running, you can re-install your favourite fonts and D/As.

To get anything even remotely Mac-like to appear, you need only the System and Finder files mentioned previously. These two files contain the Mac operating system and desktop environment. As soon as these are safely copied, your MacAmiga should spring to life. The next step is to format a disk from A-Max and copy the two Mac OS files on to that so that you can use the transfer disk again.

If you've got a Mac external drive, then bringing Mac software across into A-Max II is a doddle – just plug the drive in, boot up A-Max and copy the programs straight off the Mac disks onto A-Max disks.

On a standard Amiga, A-Max can operate in both medium and high resolution screen modes (although the latter suffers terribly from the problems of interlacing). A-Max II can also take advantage of both the Enhanced Chip Set and big screen monitors such as the Moniterm and A2024 (what ever happened to that?). However, for those of us with nor-

The A-Max Plus Version

A-Max II is available in two different configuration, the second of which is yet to come. A-Max II Plus is a totally new product designed specifically for the professional user. As well as the features sported by the current release, A-Max Plus offers a number of additional extras:

Internal Fitting

A-Max II Plus is a plug-in card which connects internally to the Amiga 1500 upwards. At last it's possible to run Mac, PC and Amiga software from a single, self-contained system box.

Mac Format Disks

With Plus, it's now possible to directly read and write to Macintosh format disks from standard Amiga drives.

MIDI Compatibility

Run such well respected Mac music software titles as Cubase, Performer and Master Tracks Pro on your Amiga (with standard MIDI interface connected to the serial port).

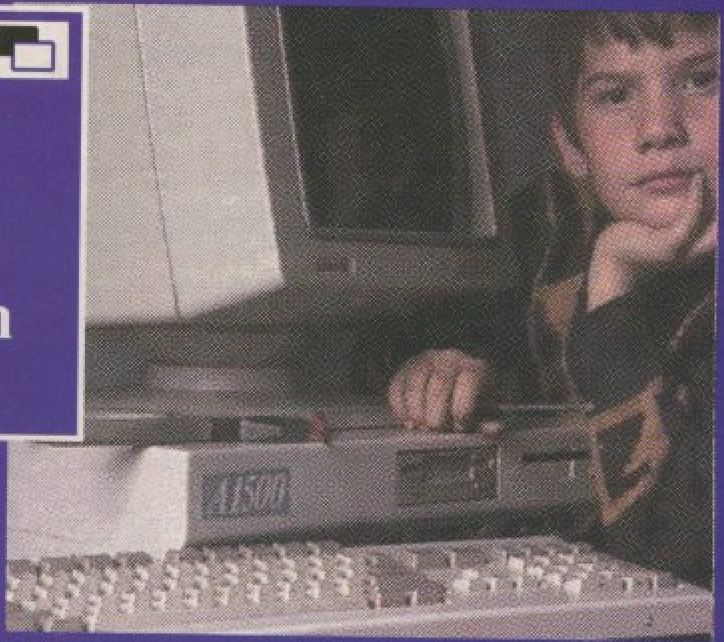
Mac Serial Ports

Talking of serial ports, Plus provides two Mac compatible serial ports, therefore allowing it to take advantage of Mac serial devices which conform to RS422 standards.

Appletalk Compatibility

Plus is fully compatible with Mac Appletalk networks and peripherals. It is now possible to directly connect the Amiga to devices such as Mac laser printers.

CDL A1500



CDL A1500

Checkmate Digital bring you the Ultimate peripheral for the A500. The A1500 Mini-Workstation

CDL A1500

A1500 Worstations

Home Station :-

A1500 Base Unit with 1 Meg Amiga
Internal second Floppy Disk Drive
Commodore A1084 Stereo Colour Monitor

Only £ 969.00

Businness Station :-

A1500 Base unit with 1 Meg Amiga
A590 Hard Drive 20 Meg with 2 Meg Ram
CDL A590 internal fitting Kit
Commodore A1084 Stereo Colour Monitor

Only £ 1395.00

New A1500 Base Unit Price Pre- Xmas Offer !! £199.00 inc vat !!

Can't afford the initial cost of the A1500 system, but you need the seperate keyboard. Why not buy the A1500 keyboard kit, this includes all the cables, and the Keyboard case of the A1500, plus the blanking plate for your A500. **£59.95 + P&P.**

But that is not all, should you decide to upgrade to the full A1500 system, then Checkmate will give you a **20% discount** on the full price, for the balance of the kit.

All Prices include Vat but exclude P&P

Ask MMG about Project X

Hard Drive Systems and Ram Cards

A590 Adaptor Kit (A1500)	£ 99.00
A590 20 meg drive 0K Ram	£299.00
A590 with 2 Meg ram	£399.00
ST506 Hard Drive 44Mb (A1500)	£499.00
ST506 Hard Drive 66Mb (A1500)	£549.00
Spirit Inmate SCSI Controller + 8 Mb Ram Board	
Un-populated + optional 68881	£199.00
Spirit SIN500 2 Meg Populated	£199.00
Spirit 512K Ram card inc. Clock	£ 49.95
Spirit Fat Trapper 4 Meg Card un-populated	£ 99.00
Floppy Disk drives 3.5 inch	£ 79.95

!! Ring for prices of the latest systems !!

Ram Chip Prices
256x4 (A590 etc) £56.00 / Mb
B2000 Ram card, 2 Meg £112.00
A3000 4 Meg of 1Mb x 4 £299.00

Colour Monitors

Commodore A1084S Stereo	£ 249.00
NEC Multi-Sync 2A	£ 399.00
NEC Multi-Sync 3D	£ 549.00
Microway Flicker Fixer B2000	£ 299.00
Microway Flicker Fixer A500	£ 349.00

CDL A1500

CSA Mega-Midget Accelerator Cards

68030 with 25MHz Processor		£560.00
68030 with 33MHz Processor		£699.00
68030 / 68882 at 25MHz		£699.00
68030 / 68882 at 33MHz		£850.00
50MHz 68882 option (six week lead time)		£399.00
512K of 32 Bit Static Ram		£299.00
32 Bit Ram board for racer cards	1 Meg	£199.00
" " "	2 Meg	£250.00
" " "	4 Meg	£450.00
" " "	8 Meg	£750.00

!! Performance far beyond the A3000 for all Amiga's !!

CHECKMATE DIGITAL LIMITED

80 Mildmay Park, London, N1 4PR
Tel 071-923 0658
Fax 071-254 1655

DISCOUNT SOFTWARE

For The Commodore Amiga

COMMODORE AMIGA A500 SCREEN GEMS PACK

includes Deluxe Paint 2, and 4 top games
OUR PRICE £369.95
with $^1/_2$ meg expansion, add £35
with Cumana 2nd drive add £60
prices include VAT and insured delivery. Add £5 for express courier.

COMMODORE A590 HARD DRIVE
auto booting from WB 1.3
OUR PRICE £349.95

BUSINESS/FINANCIAL

DG Calc *by Digita*	26.95
Home Accounts *by Digita*	20.95
Personal Finance Manager	21.95
System 3 *Invoicing, Stock Control and Cashflow Control*	35.95
Cashbook Controller	35.95
Final Accounts *Adds End of Year accounts to Cashbook Controller*	21.95
Cashbook Combo *both Cashbook Controller and Final Accounts*	54.95

GRAPHICS & VIDEO

Pagesetter 2	49.95
Comic Setter	19.95
Fantavision	19.95
Deluxe Paint III	59.95
TV Show, *by Zuma*	55.95
TV Text Professional, *Zuma*	129.95
Deluxe Video III	79.95

ZVP VIDEO STUDIO
Requires min. 1 meg & 2 drives
£89.95

RENDALE 8802 GENLOCK
£169.95

Rombo RGB Splitter *see "Specials"*
VIDI-Amiga *see "Specials"*
Digiview Gold v4 ....119.95

SOUND

Mastersound *budget sampler*	32.95
Trilogic Stereo Audio Digitiser *software not supplied*	34.95
A.M.A.S. *sampler & Midi interface*	74.95
Trilogic Midi 2 Interface *in/out/thru, 2 x out/thru switched*	34.95
Aegis Sonix	29.95
Dr. T's Midi Studio	45.95
Quartet	34.95

MUSIC-X
FULL UK VERSION 1.1
£89.95
MUSIC X JUNIOR
£49.95

DATABASES

Mailshot *(label printing)*	18.95
K-Data	32.95
Prodata see *"Specials"*	55.95
Superbase Personal	29.95

SPECIALS

NEW!! PROTEXT v5.0
Still a very fast WP program, now offering better mouse control and menus, holds up to 36 documents in memory for cross editing, newspaper style columns, new Collins dictionary, and new file selector. Comprehensive foreign language support, including Greek characters: 1 meg required.
RRP £149.95 **Our price £99.95**
PROTEXT 4.2 £64.95
Protext 4.2 demo disc £5.00

PRODATA
Arnor's new database for 1 meg machines and above. Features excellent data layout facilities, including a wide range of printer effects, and uses many Protext editing commands
RRP £79.95 **Our price £55.95**
PRODATA DEMO DISC £5.00

PRO-PACK !!
Protext v5 and Prodata
£149.95

VIDI-AMIGA
The best value video digitiser available for the Amiga. Grabs 16 shade mono images from any domestic VCR (with composite video output) to be saved as IFF files.
NTSC VERSION £79.95
300 X 200 RESOLUTION
PAL VERSION £89.95
300 X 256 RESOLUTION

VIDI-CHROME
Colour software upgrade for VIDI. Uses mono video camera and Red, Green and Blue filters (supplied) or takes still colour source if used with RGB Splitter.
RRP £19.95 Our price £15.95

ROMBO RGB SPLITTER
Takes still colour video signal and extracts red, green, and blue for Vidichrome or Digiview.
MJC PRICE £59.95
Power supply for above £4.95

HITACHI VIDEO CAMERA
Basic black & white CCTV camera ideal for digitising and producing colour images with VIDI-CHROME AND DIGIVIEW.
£219.95

MEMORY EXPANSIONS
$^1/_2$ Meg internal expansions for A500's. Real time clock and disable switch included. Will not invalidate warranty.
£37.95

CUMANA CAX354 DISC DRIVES
Quality brand-name 3.5" drives including thru port, disable switch and no hassle one year guarantee.
INCLUDES FREE VIRUS-X UTILITY
£64.95

NEW!! – EXPANDABLE UPGRADES
RAM expansion boards upgradeable to 1.8meg (giving a total 2.3 meg). Plugs into normal expansion slot with no soldering, and includes disable switch and battery backed clock.
POPULATED WITH 0.5 MEG....£54.95
POPULATED WITH 1 MEG.......£79.95
POPULATED WITH 1.8 MEG..£129.95
NOTE: When expanding by more than 0.5 meg, an internal connection is required (connector not included), invalidating your warranty.
INTERNAL CONNECTOR.........£14.95

PROGRAMMING

Hisoft Basic	58.95
Extend for above	15.95
Devpac version 2	39.95
Lattice C version 5	169.95

EDUCATIONAL SOFTWARE

Fun School 2, 2-6 years	12.95
Fun School 2, 6-8 years	12.95
Fun School 2, 8-12 years	12.95
Fun School 3, 2-5 years	15.95
Fun School 3, 5-7 years	15.95
Fun School 3, 7-12 years	15.95
Answerback Junior Quiz 6-11	14.95
French Mistress (12-adult)	14.95
German Master (12-adult)	14.95
Spanish Tutor (12-adult)	14.95
Italian Tutor (12-adult)	14.95
Discover Math, 10 and over	15.95
Discover Numbers, 6+	15.95
Discover Alphabet, 6+	15.95
Mavis Beacon Typing, 12+	19.95

ACCESSORIES

3.5" disc head cleaner	3.95
A500/2000 printer lead	6.95
Naksha Mouse	27.95
Neoprene Mouse Mat	3.95
Quickjoy 2 Turbo Joystick	9.95
Comp. Pro 5000 J/stick	13.95
Joystick/Mouse switch	12.95

AMOS
MJC PRICE JUST £32.95

DUST COVERS

All nylon fabric, not PVC type

A500 keyboard	3.95
Philips CM8833 Monitor	4.95
Star LC10, Mk1, 2 or Colour	4.95
Star LC24-10	4.95
Panasonic KXP1081	4.95
Panasonic KXP1124	5.95
Citizen 120 D and Plus	4.95

PRINTERS

All prices include 12 month guarantee, cable, a ribbon, VAT and delivery

CITIZEN 120D PLUS *Cheap 9 pin, with 2 NLQ fonts*	139.95
PANASONIC KXP-1081 *Well built, NLQ in all sizes*	159.95
STAR LC-10 MONO *Four NLQ fonts, double height*	169.95
PANASONIC KXP-1180 *Fast, 4 nlq font printer*	179.95
STAR LC-10 MONO MARK 2 *Fast version of the mark 1*	189.95
STAR LC-10 200 COLOUR *Best value colour printer*	219.95
STAR LC24-200 *Faster 24-10 replacement*	269.95
PANASONIC KXP-1124 *Better print quality than the 24-10*	259.95
STAR LC24-200 COLOUR *Star's colour 24 pin*	299.95
CITIZEN SWIFT 24 *Colour Upgrade available, 39.95*	314.95

RIBBONS

COMPATIBLE RIBBONS
Star LC-10 Mono
Panasonic KXP-1080/1081/1124
Citizen 120-D/Plus
Amstrad DMP2000-3250 range
£3.95 each £7.00 a pair

Manufacturers original ribbons

Panasonic KXP-1080/1081	6.95
Panasonic KXP-1124	7.95
Star LC-10 Mono	4.95
Star LC24-10	5.95
Star LC-10 Colour	5.95

Heat Transfer Ribbons
Produce iron-on transfers.

Citizen 129-D	10.95
Panasonic KXP-1080/1081	10.95
Star LC-10 Mono	10.95
Star LC-10 Colour	16.95

DISCS

3.5" SONY/JVC BULK GUARANTEED
10 for £6.95
20 for £13.00
50 for £29.95

BRANDED SONY 3.5" MF2DD
10 for £10.95
20 for £20.95

REPLACEMENT POWER SUPPLY
Provides up to 30% more power to cope with add-ons
£39.95

PRICES INCLUDE VAT AND POSTAGE TO THE UK
Education, Local Authority and Government orders welcomed.
Overseas customers also welcome, please call or write for quotations.
All goods subject to availability, all prices subject to change without notice. E&OE

Access

CALLERS WELCOME : 9.30 TO 5.00, SIX DAYS

VISA

M.J.C SUPPLIES (AC)

2 THE ARCHES, ICKNIELD WAY, LETCHWORTH, HERTS, SG6 1UJ
TELEPHONE ORDERS AND ENQUIRIES
LETCHWORTH (0462) 481166 (6 lines) FAX: 0462-670301

mal Amigas, you'll probably prefer to run A-Max in medium resolution (do your eyes a favour!).

A-Max now supports Mac digitised sounds. These range from the simple SysBeep tone to complex Mac samples. Most samples play OK, but problems do arise that can often result in the dreaded System Error requestor (the Mac version of the Amiga GURU) popping up onscreen.

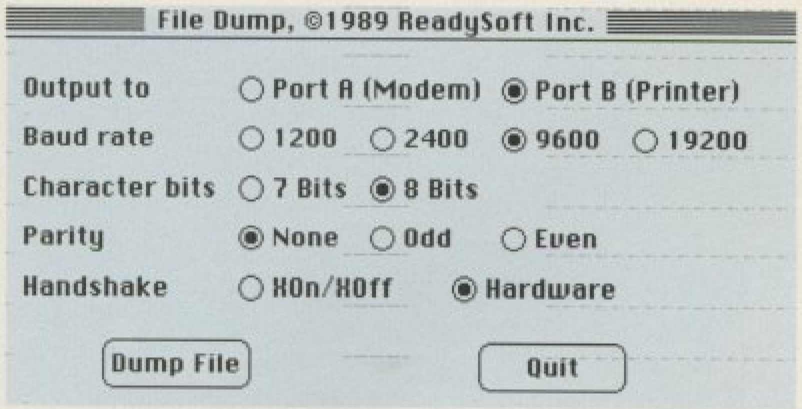
Mac digitised sound can be a lot of fun. Using a control panel utility called Sound Master, it's actually possible to assign samples to different aspects of Mac operation. For example, your Mac can be set up to play a sample when a disk is ejected, another when a disk is inserted, another when you make a mistake etc.

Probably the most major new feature offered by A-Max II is the ability to use hard drives during Mac emulation. A-Max II allows you to access hard drives in two different ways. If you're the owner of a hard drive that offers a SCSI connector (such as the A590), you can access stand alone Mac-formatted drives by connecting them directly to your Amiga via SCSI (the Small Computer Systems Interface: a standard for data and control lines which actually works). This has the advantage of allowing you to access data on a drive set up for use on the Mac.

SCSI support also extends to allow Mac SCSI peripherals to be used directly from within A-Max. These include such wondrous devices as laser printers, scanners, optical drives and so on.

Secondly, A-Max II will let you set up a Macintosh format partition on your Amiga drive. A-Max uses custom controller card drivers that are written specifically for particular makes of controller. Although not all cards are supported in the current release, ReadySoft claim that all Amiga hard drive manufacturers have been contacted and asked to produce drivers for their drives. The current release supports a number of controller cards including the Commodore 2090A, 2091, A590 and even the GVP range of controllers.

You can access up to eight A-Max compatible partitions spread across several hard drives, as long as all the drives are connected to the same controller. Although the Amiga can use any number of controller cards, A-Max II is somewhat less flexible. It's also worth mentioning that if you do intend creating an A-Max partition on



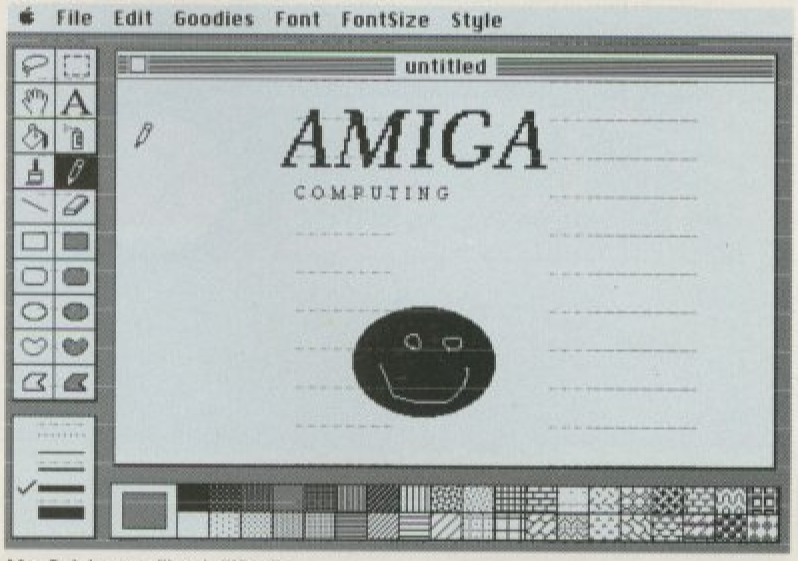
One of the utilities supplied

your hard drive, this will require you to reformat the entire drive.

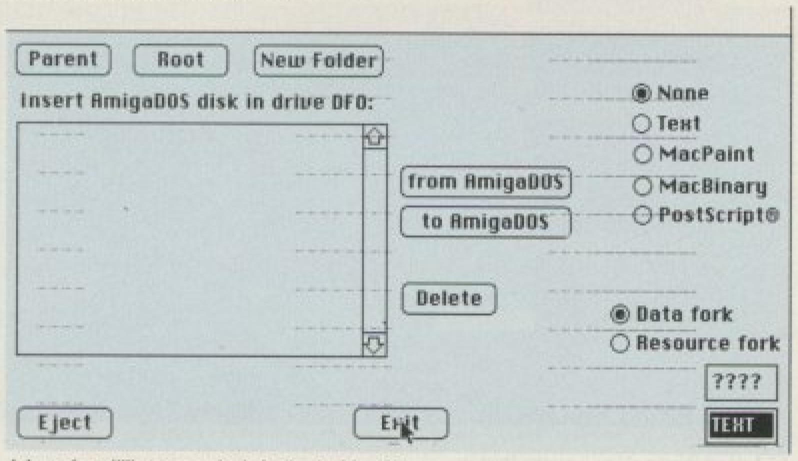
Using a hard drive with a Mac is more than just a luxury – it can often be a necessity. For example, the latest release of the Mac's premier DTP system, Quark XPress, barely fits on a high density disk, let alone a standard 800k Mac disk. Amounting to almost 1.4 Mb of data, it's almost impossible to use XPress without a hard disk. Even users of real Macs can't really use XPress unless they're lucky enough to own a Mac equipped with a high density drive (Mac SE/30 upwards). Even then, XPress has a habit of producing files that often amount to megabytes in size...

Lastly we come to the all-important subject of software compatibility. Thankfully, A-Max certainly doesn't seem to be let down in this department. Just about any Mac software that uses the Mac operating system should work fine under A-Max – I was able to run a large number of different programs including such well known titles as Quark XPress, PageMaker 4, MacWrite, MacPaint and even a number of Mac games such as Crystal Quest, MacPlayMate (ahem) and Tetris (yippie!). Just don't expect more hardware dependant programs (such as MIDI sequencers) to run properly.

On a standard Amiga, emulation runs at about the same speed (if not slightly quicker) as a Mac Plus computer. If you're lucky enough to have a processor



MacPaint runs without difficulty



A transfer utility somewhat similar to Mac2Dos

accelerator, A-Max will even take full advantage of this, allowing emulation to be speeded up by as much five times that of a real Mac.

With the release of A-Max version 2, ReadySoft have answered all the criticisms levelled at the original. Now that it fully supports Amiga hard drives, A-Max has risen from the lowly ranks of being nothing more than a curiosity to become a truly useful tool. With A-Max connected to your Amiga, it's finally possible to run quality Mac software without having to pay the kind of extortionate prices that Macs command.

PCs in our time

On the face of it, it should be impossible. Even Commodore were sceptical. OK, so emulating a PC in software is no problem – after all, the much-maligned package "Transformer" has been doing it (albeit badly) for years. Equally, emulating a PC in hardware has also been done, with the likes of the Bridgeboard systems for the A2000.

But emulating a PC using a A500 ram expansion and some extra chips? Impossible. Yet somehow it works. By slotting a card the size of a ram expansion into your Amiga 500, it suddenly becomes a PC.

To be honest, I didn't believe it possible. Even though I'd seen it demonstrated at the 16 Bit Show, I would only really believe it if I could do it myself.

So I did it. And it worked. My multitasking, 68000 based, WIMP environment Amiga had been "upgraded" to be a PC compatible. Amazing. Installation took less than an hour. Although packaging for the latest gizmo usually says "fitted in moments", to be honest I usually spend over an hour plugging-in, testing and getting software organised.

This time all I had to do was duplicate some disks, plug in the card and re-boot. My Amiga was a PC.

As I normally make it a rule not to use a PC, I didn't have much in the way of suitable software. So I walked all the way across the office and asked the editor of the magazine, PC Today.

"Here", he shouted, "try this."

And he gave me some diagnostic software.

"I'll be very surprised if it works!" he yelled (this is not unusual). It worked.

All the tests with the exception of the DMA tests (which were irrelevant) were passed with flying

colours. Even keyboard mapping, which had me worried, was no problem. Just as a matter of interest, it turns out that using function keys greater than F10 actually works, so don't fear commands that say "Press F12 to continue".

The software also provided a useful benchmarking system which I promptly tried on the other office PCs. I'll tell you what they came out like later. Don't want to spoil the surprise.

Once the board is fitted, you have a choice of two possible computers under your creamy beige plastic keyboard.

The first (and more technically advanced) is your Amiga, although now it has one or two extras. For starters, you have an extra half meg of memory just like an A501 ram expansion. You also have a battery-backed real time clock, just like the official A501 memory expansion and the unofficial ones which cost a tenner extra.

As an extra bonus, you even get an additional 512k ram disk, although I have to admit I had problems getting this to work. KCS say that if you have an A590 or any other hard drive which uses DMA (Direct Memory Access – a way of speeding up drives by allowing them to read/write directly to/from memory independently of the main CPU) then don't bother trying, as version 1 of the system software doesn't like it.

As far as the Amiga side of things go, that's about it. Once the ram disk problems are sorted out, you'll have everything you could want from something plugged into your trapdoor, and a little bit extra besides.

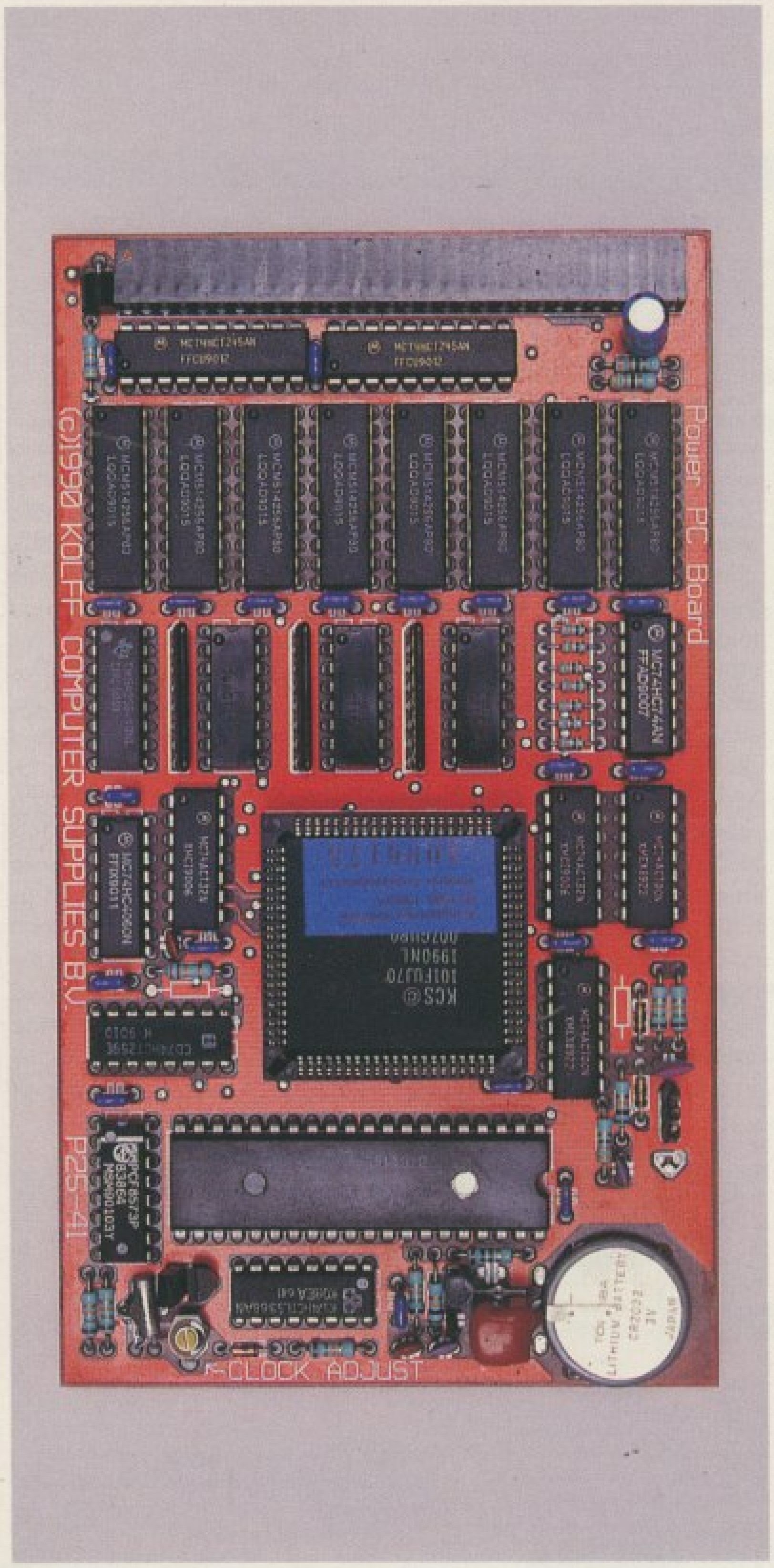
If you want to defect and use your Amiga as a PC, you have to perform the following steps.

Step 1: Remove any hard disks you may have attached and throw them away. You won't need them for a bit.

Step 2: Boot from floppy disk "A"

Step 3: Load MSDOS v4 from floppy disk "B"

And that's it. If this seems a bit complicated for you, there is a complete, totally user-friendly front end program to help you configure your new PC to get the most from it in the way of graphics modes, serial ports, external disk drives and mouse interfaces. If a particular PC package you are using has some strange screen colours, you can hit the "help" key at any time and redesign them.





Microsoft Works does – works that is

It's been some time since I used PC software, and things have certainly changed. You would be amazed at the lengths PC programmers go have to go to to ensure "user friendliness".

Most modern programs use pull down menus, hot keys and drop shadow windows. It all looks very out of place on something which to me has always said "boring".

There would be little point in me telling you how high the standard of emulation is. If I were to say it will work on all PC programs, someone somewhere would buy it to run a particular program and it would fall down.

All I will say is that I tested a fair number of programs, including games, word processors, databases and spreadsheets. They all worked fine. The only drawback was the need to use floppy disks all the time. KCS say that if you have a particular program in mind, check with them first to see if it runs. Seems fair to me.

The speed of the KCS Power board is not particularly stunning. In fact, according to the well-respected benchmarking programs I ran, it even runs slower than an Amstrad PPC. It was completely blown away by a 80286 based PC.

Why buy an ST emulator?

I know what you're asking yourselves. What's the point in emulating an Atari anyway? Surely there's not a great deal that an Atari could do that the Amiga couldn't do better? After all, isn't that the reason why you bought an Amiga in the first place? Well, to a greater extent, you'd be right; the Amiga does have a habit of doing things just that bit better than all the rest.

There are exceptions to this – and it's MIDI software. Although the Amiga is finally starting to get its fair share of decent MIDI software (Pro-24, Master Tracks Pro and MusicX are fine examples), the standard of ST MIDI software stands miles above the rest – even Mac and PC MIDI software can't touch it.

Pro-24 may have just arrived on the Amiga, but it's positively prehistoric on the Atari. Steinberg have since upgraded it to a considerably better program called Cubase, which is already in its second revision. Then there's the C-Lab range of software, Virtuosa and Realtime.

Why buy a Mac emulator?

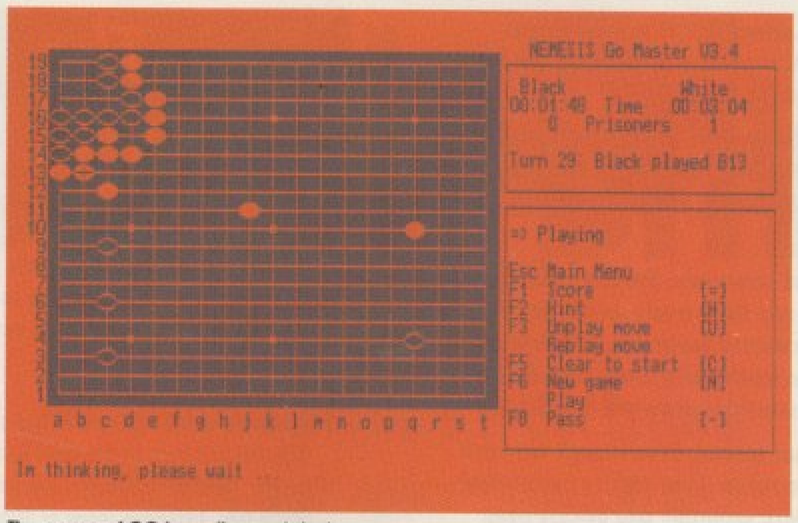
The obvious reason is to get a Mac on the cheap.

Apple computers are, shall we say, a bit on the costly side. Even buying an Amiga and emulator from scratch will save you money. Of course, if you already own an Amiga you'll have to splash out even less.

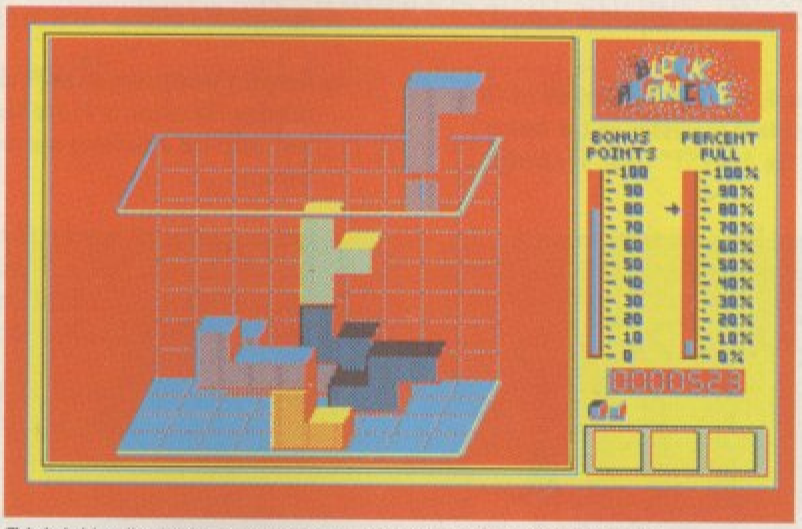
The Mac is the favourite machine when it comes to Desktop Publishing. Rightly or wrongly, talk to someone about DTP and you'll always end up talking about Macintosh computers.

Although the Amiga now supports wonderful packages like Professional Page 2 which in many aspects can out-perform the Mac standards, there is still a lot to be said for emulating one.

For example, in a situation where Macs have already been installed, it would be financial madness to chuck them all away and start again with Amigas. However, when it comes to expanding the system, an A2000 with A-max 2 Plus could be plugged into the network like any other Mac with a considerable saving. Plus you have all the benefits of the graphically and sonically superior machine, as standard.



The game of GO is easily emulated



This is taking it a bit far perhaps. Future Classics will run on this emulator

Why buy a PC emulator?

The PC has never been renown for excelling in a specialised field. Graphics, sound, DTP and MIDI are all better left to other machines.

Nevertheless, the PC has been around for a long time: Almost since the very beginning it appears. As a result, it has earned itself a remarkable collection of software. Forget up-to-the-minute animation packages, we're talking productivity here.

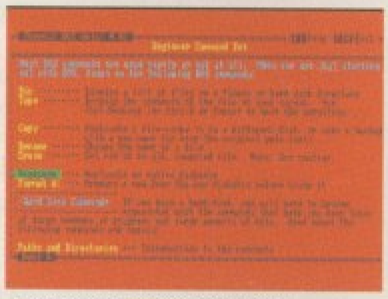
Word processors, spreadsheets, databases: The PC has a greater choice in these fields than any other machine in existence.

What's more, most of the PC software around is free: It's public domain. There is still more PC PD than Amiga PD, and you know how much Amiga PD there is out there!

Another reason to invest in a PC compatible is that old cliched situation the "PC at work, home computer at home". If you really need to take work home from the office PC and continue at it home on the family Amiga, here's the solution.

The final scenario is one which appears in our mailbag several times a week. A lot of colleges and universities use PCs as course machines. The poor students are forced to learn programming languages and how to use spreadsheets on the out-of-date campus equipment.

Most students find that they need to use the machines out of normal daytime hours, but also find that due to lack of funds their numbers are limited and competition for access is fierce. Adapting the ever present Amiga could be the ideal solution.



A useful help utility is included



The board will boot from PC floppies

Mac, ST emulators:
Jason Holborn
PC emulator:
John Kennedy

Tech Spec

Medusa ST Emulator

Supplier:
Medusa Macro Systems 010 49 2330 801132
Emulates:
Atari ST – several TOS versions
Price:
£180
Software supplied:
Utility and "rom grabbing" software
Amiga required:
A2000 up. A500,A1000 versions "coming soon"
Floppy disk support:
Yes, using standard Amiga drive
Hard disk support:
Yes
Multitasking:
No – "coming soon"
Compatibility:
Good

A-max 2

Supplier:
Readysoft/Entertainment International
Emulates:
Apple Mackintosh
Price:
around £250 (including roms)
Software supplied:
Set-up utilities
Amiga required:
A500. A2000 Plus version "coming soon"
Floppy disk support:
Needs Mac drive.
Plus version will use standard Amiga drive
Hard disk support:
Yes
Multitasking:
No
Compatibility:
Good

KCS Power Board for A500

Supplier:
BitCon Devices, 091 4901919
Emulates:
PC (CGA and Hecules graphics modes)
Price:
£320
Software supplied:
MSDOS v4, Shell, Utilities
Floppy disk support:
Using Amiga drive and supports 5.25 inch systems as well
Hard disk support:
No – "coming soon"
Multitasking:
No
Compatibility:
Good
Special:
Acts as memory expansion with clock when running AmigaDOS. Extra RAM disk possible.

Presenting PROTEXT 5.0

Five years to the month after Protext version 1 was launched Arnor are pleased to present version 5, an enormous leap forward in both ease of use and performance.

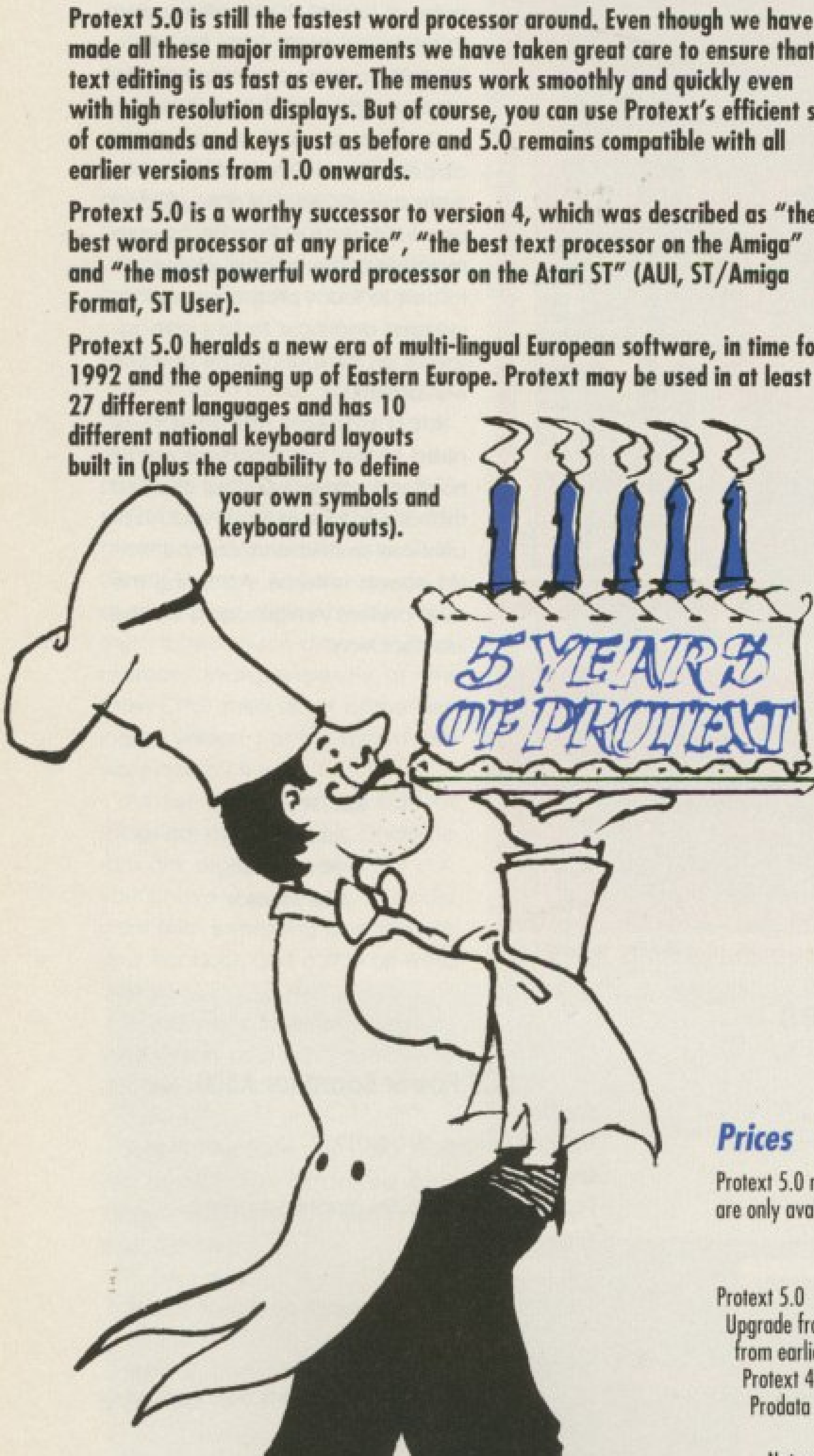
Protext 5.0 introduces a completely integrated system of pull down menus and dialogue boxes. The menus are among the many operations that may now be carried out with either the mouse or the keyboard. Protext really does give you the best of both worlds.

Protext 5.0 handles printer fonts flexibly and accurately. You can make full use of any number of proportional printer fonts, mix them freely within any line, centre them in headers, use automatically formatted footnotes. And Protext correctly formats your text as you type it, no matter how many font changes you use, showing you line and page breaks exactly as they will be printed.

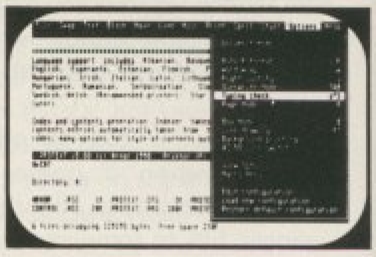
Protext 5.0 is still the fastest word processor around. Even though we have made all these major improvements we have taken great care to ensure that text editing is as fast as ever. The menus work smoothly and quickly even with high resolution displays. But of course, you can use Protext's efficient set of commands and keys just as before and 5.0 remains compatible with all earlier versions from 1.0 onwards.

Protext 5.0 is a worthy successor to version 4, which was described as "the best word processor at any price", "the best text processor on the Amiga" and "the most powerful word processor on the Atari ST" (AUI, ST/Amiga Format, ST User).

Protext 5.0 heralds a new era of multi-lingual European software, in time for 1992 and the opening up of Eastern Europe. Protext may be used in at least 27 different languages and has 10 different national keyboard layouts built in (plus the capability to define your own symbols and keyboard layouts).



The Features



☆ **New fast & easy to use pull down menu system** with dialogue boxes and alerts; file selector; mouse dragging to set blocks. Menus complement existing commands and keyboard shortcuts, do not replace them. Menus may be used with mouse or keyboard. Amiga version follows Intuition guidelines.

☆ **Enhanced printing capabilities** supports multiple proportional fonts; mixing of different font sizes on the same line; proportional formatting whilst editing; side margin, headers and footers independent of main text font. Tabs, decimal tabs and centre tabs. Extensive range of printer drivers supplied.

☆ **Multiple file editing** - up to 36 files may be open; split screen editing.

☆ **Graphics mode support** on PC allows use in virtually any text or graphics mode including 132 column or 75 line VGA modes; user defined characters and on-screen bold, italics and underlining now on all versions; use of 13 different accents on any character.

☆ **Language support includes** Albanian, Basque, Czech, Danish, Dutch, English, Esperanto, Estonian, Flemish, Finnish, French, German, Hungarian, Irish, Italian, Latin, Lithuanian, Norwegian, Polish, Portuguese, Rumanian, Serbocroatian, Slovak, Spanish, Slovene, Swedish, Welsh. (Note: some printers do not support all languages).

☆ **Index and contents** generation. Indexer takes marked words or phrases; contents entries automatically taken from titles wrapped in control codes; many options for style of contents output.

☆ **Spelling checker** features completely new 110,000+ word Collins dictionary with very fast phonetic lookup. Anagrams and find word pattern. Foreign language dictionaries (German, Swedish available now, others to follow).

☆ **Many other enhancements** including multi-line footnotes and endnotes; automatic timed save; add column or row of figures; indent tabs; find word at cursor; 40 column mode support; sentence operations; inter- paragraph space; much improved expression evaluator; self incrementing variables; Roman numerals; newspaper-style column printing; file sorting utility with special options for names and addresses; revised manual plus new tutorial guide.

☆ **And don't forget Protext still includes** background printing; box manipulation; macro recording; exec files; headers and footers; find and replace; mail merging; undelete; file conversion utility; configuration program; auto reformatting; on screen help; time and date; typewriter mode; line drawing; disc utilities.

Prices

Protext 5.0 may be purchased from any good computer shop or directly from Arnor. Upgrades from earlier versions are only available from Arnor and the original discs should be returned with your order.

	PC	Amiga	ST/TT	Archimedes
Protext 5.0	£149.95	£149.95	£149.95	£149.95
Upgrade from v4.2	£60	£60	£60	N/A
from earlier versions	£75	£75	£75	N/A
Protext 4.2	£99.95	£99.95	£99.95	N/A
Prodata 1.1	£79.95	£79.95	£79.95	due 1991 Q1

Notes:

Protext 5.0 requires at least 640K of memory on all machines
Protext 4.2 requires at least 512K of memory on all machines
Prodata requires 1MB of memory on the Amiga

ARNOR

Arnor Ltd (AMC), 611 Lincoln Road, Peterborough, PE1 3HA. Tel: 0733 68909 (24 hr), Fax: 0733 67299

Hi Density Driving

Why do we still have to put up with 880k of disk space in the 90's? We don't, as Jolyon Ralph shows us with some hi-tech equipment fresh in from the U.S.

When the Amiga was launched way back in 1985, one of its revolutionary features was its double sided 880k 3.5inch disk drive. At that time, everyone in the IBM world was still using 5.25in disks, and the Apple Mac and Atari ST had single sided 3.5in drives as standard.

Even when the ST and Mac got external double sided disk drives, they could only manage 720k and 800k on a disk respectively.

However, the Amiga's has since been overtaken by newer machines from IBM and Apple. IBM released their PS/2 range using hi-density 1.44Mb disk drives, and Apple soon followed with high density drives in their top-of-the-range Mac II's. Even the lowly Atari ST has now got external high density drives.

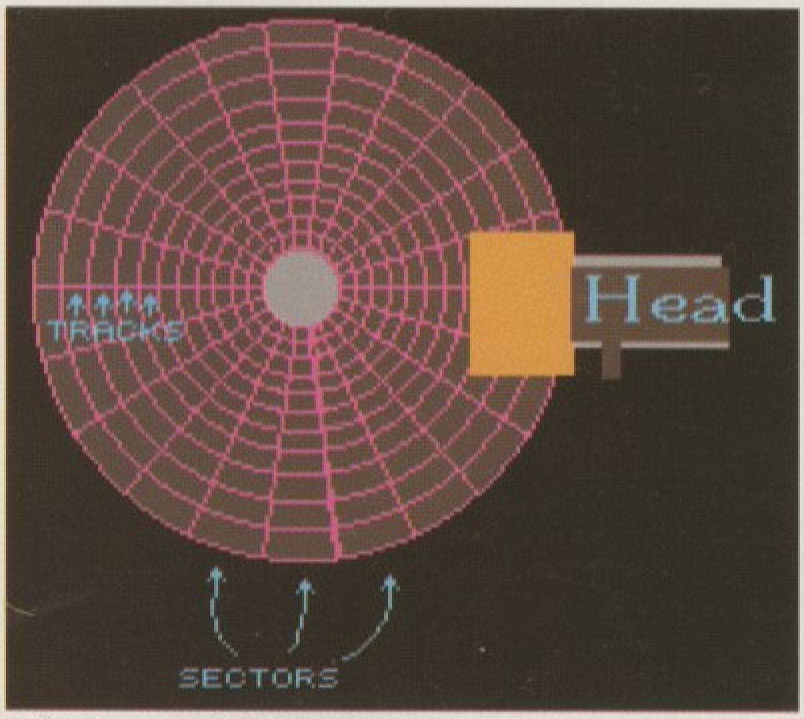
Now, Applied Engineering from the States have released a drive that brings the Amiga back into the lead.

Their AEHD external disk drive can format disks to 1.52Mb, beating both IBM and Apple.

The drive comes in a very nicely produced external case, and the first thing that strikes you is that it looks like an external Macintosh drive.

This is no surprise, as Applied Engineering make external drives for the Macintosh as well.

The AEHD drive can also be used as a straight-forward 880k external drive, and has some quite neat features. It uses the same Sony disk mechanism that is found in the Apple Macs. This has automatic disk ejection.



The block arrangement of a standard floppy

Auto Eject

On the Mac, if you drag a disk into the wastebasket it will eject the disk for you. The Amiga's operating system doesn't (yet) support this (come on CBM, roll on Workbench 3.0), but there is a small button on the front of the disk drive that will eject a disk. This may seem to defeat the whole object of automatic disk ejection, but it allows the drive to only eject disks when it is safe (when the disk drive is not reading or writing).

One nice feature of this is if you do a disk to disk copy and press the eject button, it will wait until the disk has copied and then eject the disk.

Not really that useful, but it's a great way to show off and it's a much better way of attracting your attention than the customary beep or the rather annoying screen-flash.

Another nice touch is the dual colour LED. This is yellow when the drive is reading, and red when the drive is writing – an easy way to tell if something nasty is trying to write to your disks without warning you.

Double Device

When plugged in, the drive behaves just as if it was a fancy 880k drive. To get it to use high density disks there is a special driver file that patches the Amiga's Trackdisk.device. It makes the drive behave as if it were two drives, DF1: for 880k disks and DF5: for 1.52Mb disks.

Only four lines need to be added to your startup sequence file for the changes to be made permanent.

Once the changes have been made and the machine re-booted, any high density disk will come up as df5: and a low density disk will be df2:

The drive detects whether a disk is high density or standard double density by checking for the special hole on the left side of high density disks. While it is possible to drill holes in the normal 1Mb disks, the coatings on the disks are different, and disks converted this way are not reliable.

The drive works fine with all the hard disk backup programs I tried it with, but I could not persuade either dos-2-dos, Crossdos or the public domain MessyDOS to read 1.44Mb IBM disks on it however much I fiddled with mountlists and other such things.

This is not a fault of the drive, as the software was written long before it became available. It should also be possible to read Apple disks on this drive, with the right software.

The Meg War

Now the Amiga is ahead again, however, it will not hold the lead in floppy storage for long. The recently-announced PS/2 Model 90 from IBM will have a 2.88Mb floppy drive.

Citizen have announced a 20Mb floppy drive with SCSI interface will be available soon. Up to 7 of these could be linked to an A590-equiped Amiga.

With the current exchange rate, the drive works out quite cheap. It's excellent for showing off, and the high density disks are a vast improvement for hard disk backups

A great piece of hardware, excellently made, a good price, and works well.

When it can read high density IBM disks and Apple disks it will be perfect.



Everyone (yes, EVERYONE) saves money buying presents at the Computer Shopper Show!

An exit poll conducted at last year's Computer Shopper Show revealed that 95 per cent of customers reported "substantial savings" from purchases – with individual figures ranging from £50 to more than £1,000!

- **One-stop shopping for ALL your computer Christmas presents!**
- **Hundreds of stands packed with special show bargains!**
- **Expert advice to help you make the right choice!**

Thursday 6 December 10am-6pm

Friday 7 December 10am-6pm

Saturday 8 December 9am-6pm

Sunday 9 December 10am-5pm

BLACK MOON COMPUTERS

BLACK MOON

AMIGA 500
399.95
SCREEN GEMS

+ BLACK MOON PACK
512K RAM, 1 MEGABYTE DISK DRIVE, TV MODULATOR, MOUSE, MANUALS & TUTORIAL DISK, KICKSTART 1.3, WORKBENCH 1.3, BACK TO THE FUTURE II, DAYS OF THUNDER, SHADOW OF THE BEAST II, NIGHT BREED, DELUXE PAINT II, DISK BOX, MOUSE MAT, DUST COVER, 10 BLANK DISKS AND TWO SUPERB JOYSTICKS.

349.95

AMIGA 500, KICKSTART 1.3, WORKBENCH 1.3, MANUALS & TUTORIAL, MOUSE, MODULATOR.

BLACK MOON COMPUTER CLUB

The prestigious members only club for computer software, blank media and peripherals. What you get:

Free membership card exclusive to you.

Free updates on all new releases.

Free advice and helpline.

No obligation to buy. (Unlike other clubs)

Big Big discounts. Look at these examples.

Robocop 11	**16.99**
Kick off 11	**12.99**
F19 stealth fighter	**19.99**
Days of thunder	**19.99**
Midnight resistance	**16.99**
Night breed	**16.99**

Annual membership £5.00

MEMBERS ONLY

AMIGA 500
399.95
FLIGHT OF FANTASY

+ BLACK MOON PACK
512K RAM, 1 MEGABYTE DISK DRIVE, TV MODULATOR, MOUSE, MANUALS & TUTORIAL DISK, KICKSTART 1.3, WORKBENCH 1.3, F29 RETALIATOR, RAINBOW ISLANDS, E.F.T.P.O.T.R.M. DELUXE PAINT II, DISK BOX, MOUSE MAT, DUST COVER, 10 BLANK DISKS AND TWO SUPERB JOYSTICKS.

CM 8833 COLOUR, STEREO MONITOR	249.95
1 MEGABYTE d.s. EXTERNAL DRIVE	69.95
512k MEMORY EXPANSION + CLOCK	49.95
COMMODORE GS GAMES CONSOLE	99.95
SEGA MEGADRIVE	189.95

All our hardware comes with 1 years GUARANTEE and FREE delivery

AMIGA 500
599.95
CLASS OF 90 1st STEPS

+ BLACK MOON PACK
AMIGA 500, MOUSE MODULATOR, MANUALS, A501 MEMORY EXPANSION, PRO WRITE 2.5, D PAINT II, D PRINT II, INFO FILE, LOGO, MUSIC MOUSE, TALKING TURTLE, BBC EMULATOR, BOX OF 10 DISKS, MOUSE MAT, RESOURSE FILE, INTRO VIDEO, LET'S SPELL AT HOME, DUST COVER AND TWO SUPERB JOYSTICKS.

3.5 40 holder with 10 3.5 d.s.d.d	11.99
3.5 40 holder with 20 3.5 d.s.d.d	15.99
3.5 40 holder with 40 3.5 d.s.d.d	27.99
3.5 80 holder with 10 3.5 d.s.d.d	13.99
3.5 80 holder with 40 3.5 d.s.d.d	29.99
3.5 80 holder with 80 3.5 d.s.d.d	49.99
Cheetha 125	7.99
Cheetha starprobe	14.99
Pro 5000 extra	14.99
Konix navigator	14.99
Replacement mouse	29.95

AMIGA A590
399.95
HARD DRIVE

+ BLACK MOON PACK
20 MEGABYTE HARD DRIVE WITH 2 MEGABYTE UNPOPULATED BOARD, DISK BOX, MOUSE MAT AND DUST COVER FOR AMIGA 500, SPRITZE, COMIC SETTER, FANTAVISION

36A Osborne Street, Colchester, Essex. CO2 7DB

PHONE (0206) 560638

Access

BARCLAYCARD VISA

CHEQUES AND POSTAL ORDERS PAYABLE TO BLACK MOON. POST AND PACKING FREE IN UK. Overseas charged at cost. Subject to availability and price change without notice. Some titles may not be released at time of going to press. Shop prices may vary, but personal callers can claim advertised discounts on production of cut-off slip. All prices include VAT.

TITLE	COMP	PRICE
	TOTAL £	

ACTION DEC

Name ______

Address ______

______

______

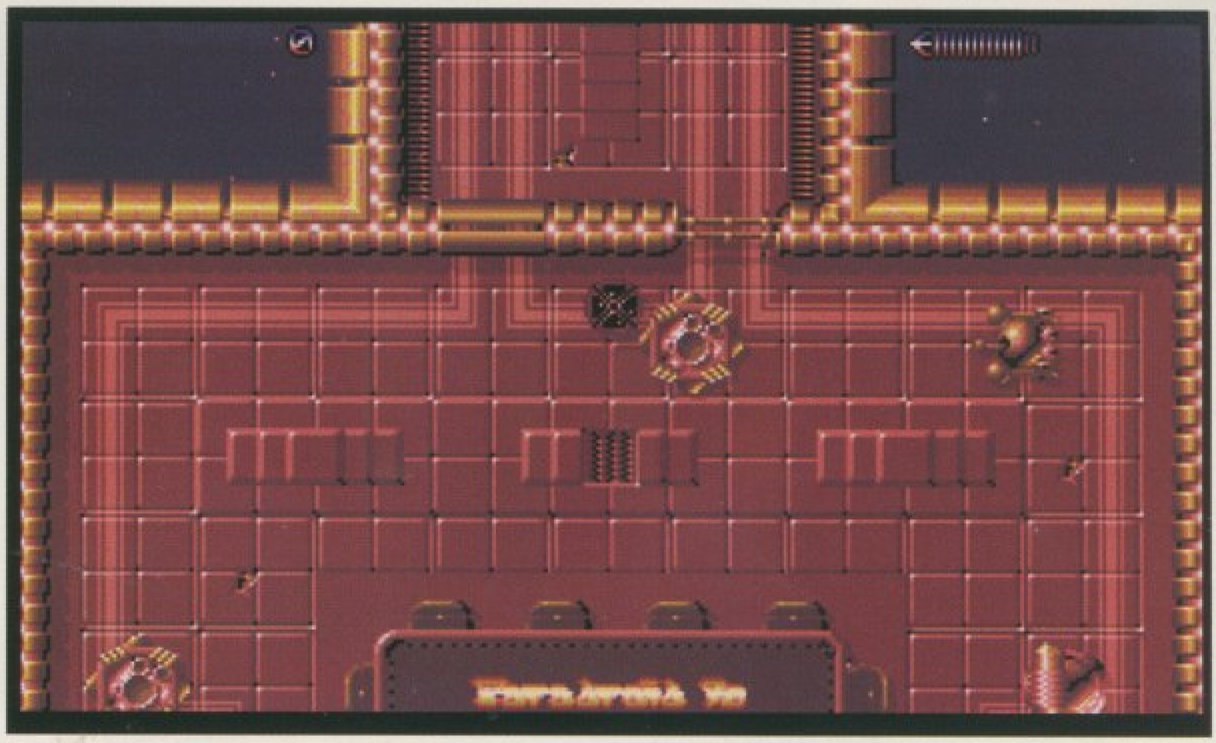
Tel No. ______

Have you ordered from us before (yes/no) ______

you are now entering

theGame Zone...





PARADROID 90

Publisher: **Hewson** Price: **£24.99**

WAY back in the mists of time, so far ago that even the so called good old days of home computing were but a distant memory, and so long ago that even this hallowed organ was but a twinkling in the eye of The powers that be... Er where was I?

Oh yes, it was 1985 in fact, and it was just about the last year it was worth owning a Commodore 64 because Andrew Braybrook's Graftgold released Paradroid, and followed it up the next year with the wonderful Uridium.

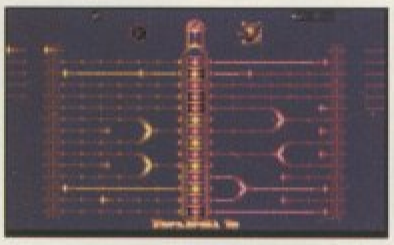
Surprisingly our Andy has rehashed his original game to give us Paradroid 90. What next, Uridium 91?

The reason Paradroid was a resounding success was that it was a jolly good 8-bit game. However, expectations, game design and the standard of software has advanced since then (though it might not seem like it at times). So does the old dog still have a few tricks left or is Paradroid 90 only a series of toothless woofs ?

To find out you first have to digest the plot. Easy enough. Out there in space is a place called Basmyth. The neighbouring Trimorg Empire wants to annex it Iraqi style. Our forces send out a fleet of freighters to counter the threat. From out of nowhere comes a Flash Gordon Death Ray which turns all the droids onboard into metallic communists.

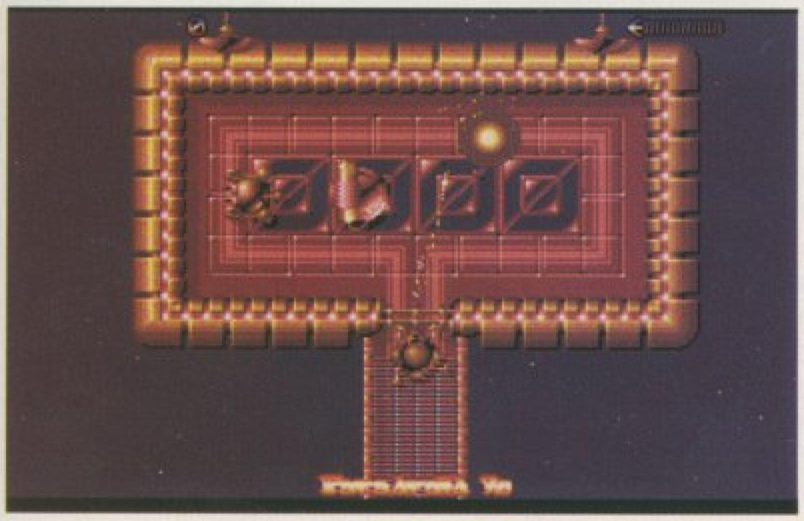
They round up all the capitalist, land owning, fascist pig, police state, running dog lackies, otherwise known as the human crew, and put them up against a wall. You are also a droid, which makes the whole exercise one of droidicide.

To facilitate the droidicide you are armed with a feeble laser, a small energy supply, and poor armour. You only get one life, and the droids on the ships are bigger, faster and meaner than a rattlesnake in your codpiece. Viewpoint is top down, with fairly



anaemic ship graphics and droids. The screen scrolls up and down if you progress in those directions, which is in fact, fewer directions than on the Commodore 64.

You can access desk consoles and call up data on the function of the deck you are on (they are linked by lifts), the number and type of droid inhabiting it, and correspondingly, hints on the best way to proceed.



Now you can run around and just blast every card carrying can you see, which is fine. You might just make it off this deck in one piece. But you won't get any further I assure you.

The crux of the game is in fact a sub-game. You have the ability to lock onto another droid and play out a transference game for possession of its metallic hide. This involves shooting pulses of energy at a central bar, and hoping that when the timer runs out you have more receptors in your colour than the opponent. The trouble is that you only get a limited number of shots, and the bigger the opposition, the more shots they have.

There are numerous fiddly bits which gives you unchangeable receptors, two shots for the price of one etc., and you can swop sides before you start, so a small dollop of strategy and tactics comes into play.

Indeed, unless you tackle some of the droids on the lower decks in a certain order, transferring as you go, then you won't be able to finish the game. It'll take you a long time to get that far though.

Paradroid 90 is tough work make no mistake. It's also incredibly irritating to lose your very first transference game and thus get blown to bits and have to go back through the title page and credits.

Paradroid 90 is a fair game, enjoyable at times, frustrating at others, but it does show its age. Roll on Uridium 91 is what I say.

Graphics

Graphically Paradroid 90 is unimpressive, but this is partly due to the game design. If it had been rendered in 3-D with exactly the same objectives it would have looked far better, but then it might not have played the same.

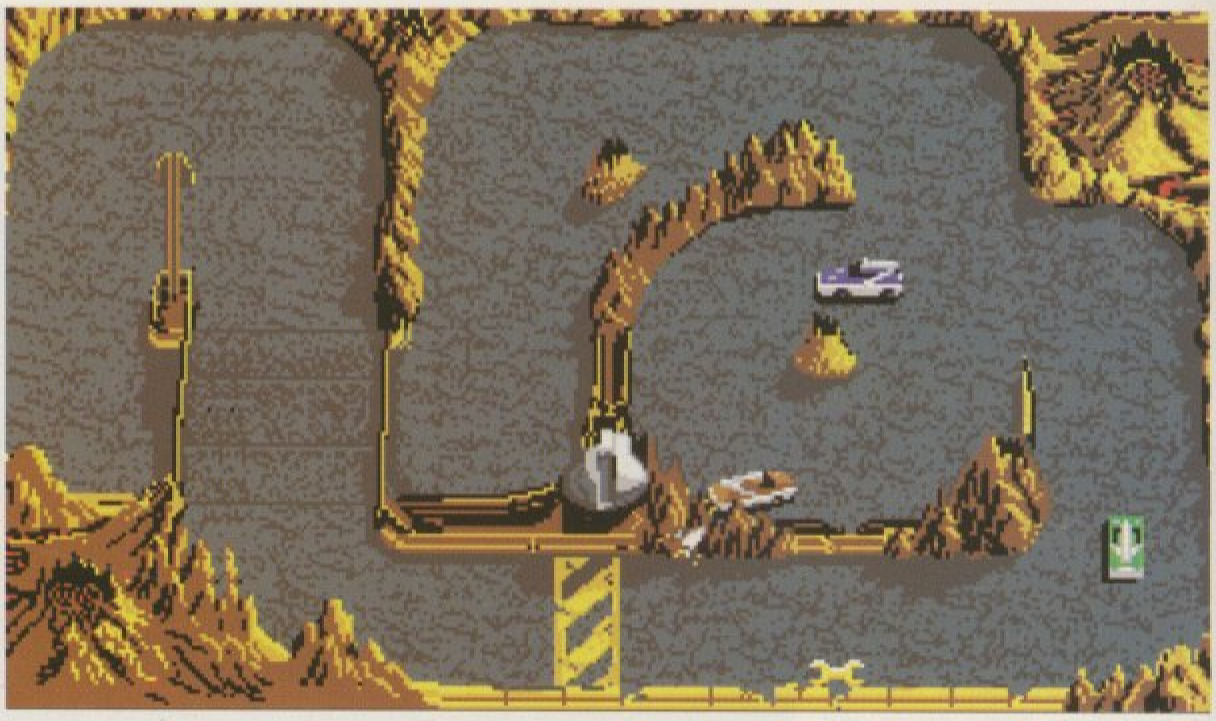
Sound

Suitably weird effects which have undergone much the same sort of update as the graphics.

Gameplay

Slightly tougher than the original and unbearably frustrating at times. Considering that this is an update for 16-bit owners I don't really think dogged adherence to an 8-bit design from five years ago was that important.

I DON'T wear these sunglasses just to look cool, ya' know. I don't wear them just to make me look like Tom Cruz – no way man. Although I have to admit there is a likeness. Especially when I have my crash helmet on and no one can see my face. I mean, if I was a bit shorter and a bit more handsome and spoke with an American accent no one could tell us apart. If I had my sunglasses on and my helmet.



Anyway, the real reason I wear my glasses is to protect my eyes, man. You gotta be careful these days, ever since the Disaster. The Nuclear Disaster that is. The Big One. The Numero Uno. Le Grand Fromage. The El Supremo Disaster. The Disaster which made all the other disasters begin with small letters. Man, it was wicked.

But, hey, life goes on, doesn't it? OK, so things are a bit harder these days. Back before It happened, you could sprint round a track with nothing but the occasional oilslick to worry about. Pick up a few spanners and you were away: Turbo boosters, extra-sticky tyres, power assist steering – you know the drill. Good clean healthy fun.

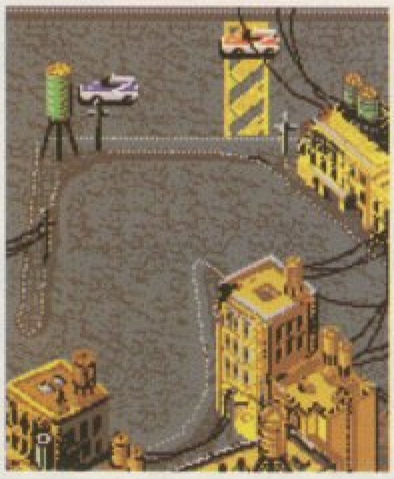
BADLANDS

Publisher: **Domark** Price: **£24.99**

Man, that was history. These days no one goes nowhere without a full set of armour plating. You better believe it – just watching a race is now an offical health hazard. Each set of wheels comes with a machine gun as standard, 'cos if someone is in your way you don't spend time thinking about tactics. You just convert his car into a Nigel Mansell special. Scrub it out.

Course, you still got all those Turbos and whatnots, but this time you also got rockets to buy. No one argues with those babies: Whammo! and it's out with the replacment car. Now that's my idea of overtaking.

The circuits have changed too so don't expect no more pansy custom built race tracks. We race in the real world: Knackered cities, scrap yards, chemical factories, Interactive carparks – in other



words the worst, man, the worst.

What makes it better is that you can also blow these dumps away. Sure, take a dislike to a certain chemical storage drum and Kerstunch! it's gone. Oops, did I leave a huge acidic slick for you, buddy? That's too bad. Hur, hur.

And when you raced all eight, you just turn around and race 'em again. Freaky stuff man, re-negotiating all them corners. That is, if there are any corners left. Sometimes the ground get's a bit weak, ya know? Tends to fall away in places. Isn't the state of the roads shocking?

Yep, things have changed around here. Now you got yourself a real race. No more mister nice guy. If you had yourself a fine time with the old-style racing, you're just gonna *love* this one. Take my word on it. Or face the consequences. And my rocket launcher, OK?

Graphics

Superb. The high resolution display of the Amiga could have been custom built for this kind of game. Equals the arcade version easily.

Sound

Better than average tunes, worse than average sound effects.

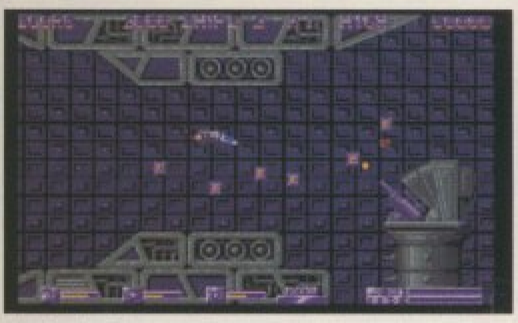
Value

Let's see: How many times would you play this game in an arcade? Ten times? Twenty times? Fifty times? This is how you would rate this game in the value stakes. Work the sums out for yourself.

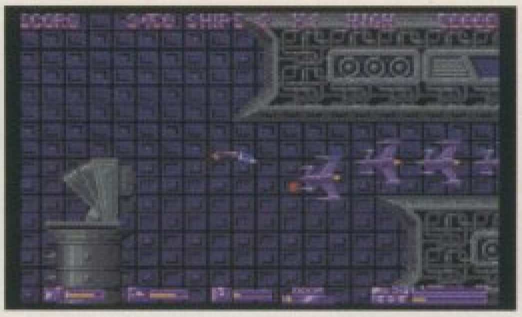




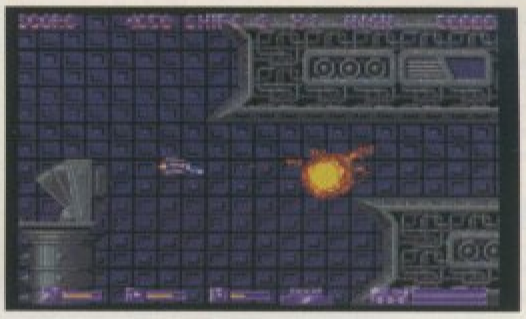

VOODOO
NIGHTMARE
ROMERO'S SUPPLY HUT
Boots Barker has had a bad day. Stranded in the heart of darkest Congo, he is hounded on all sides by wild animals, natives, jungle gods and the malevolent Witch Doctor. Perhaps things will improve when night falls?
This huge isometric 3D arcade adventure contains some of the most cute and colourful graphics you will ever see. Instantly Playable with simple controls, the game will take you months to complete.
Explore the five underground temples, battle through a vast expanse of jungle, buy exotic items at the native shops, gamble your prizes away at the casino, embark on secret missions and that's not even mentioning the legendary Part II...
Voodoo Nightmare: It's a jungle out there!
"Voodoo Nightmare is huge, it will keep you occupied for ages. Well worth the money." "Superb . . . check it out!" Amiga Action. AA awarded
"Its enormous." "Really addictive . . . you'll find yourself playing it weekend after weekend until you've finished." C & VG. C & VG Hit
"Exquisite graphics ... a plethora of thoughtful touches." "Voodoo Nightmare is a cracker!" The One
"Spellbinding graphics will entrance all gamers for ages." CU Amiga. Screenstar
ATARI ST
PALACE
AMIGA



Under fire from an enemy gun emplacement



I wonder if they want to make friends



Just vape the suckers!

NECRONOM

House: **Linel** Price: **£24.95**

WELL, the interesting thing here is that apparently sideways scrolling shoot 'em ups are beloved of all nearly intelligent races.

You are at one side of a latticework of levels, the premier bad mother (TM) is on the final level at the other side. If you complete the first level, you have a choice of three levels and two directions to go in, so even if you can't get any further, at least you'll be able to play four levels.



Is he shooting at me? Surely not.

The levels around the edges tend to be easier than those straight up the middle, but as you'd have to play one or two more to actually get to the other side, and as they are all horribly difficult, the value of taking the roundabout route becomes a moot point.

Anyway, off to level one, and its arm your ship time, to the accompaniment of a simple yet menacing tune. You get five points to spend on: Ship speed, bullet spray directions, bullet strength, bouncing bombs/missiles, the disruptor, shields and score multiplier. Since it's nice to have lots of everything there obviously isn't enough to go round. If you finish the first level you get an extra two points, but sorting out your original five is tricky. What you need is a bit more speed, lots more bullet power, and one bouncing bomb. At the end of this level you need to be able to change your fire pattern so a point has to go on that.



Ooeer, this looks a bit complicated for a mindless thug like me.

Right, on with the action. A smallish screen scrolls pretty smoothly from right to left. Sprites are reasonably good, but the scenery doesn't match even Menace, never mind Blood Money. There are two real bottlenecks on the first level, where the scenery closes in, and killer beserker sprites gallop madly at your ship.

Manic jabbing of the fire button is required in places, while careful manoeuvring is called for in others.

If you finish a level you get a password, but you are only allowed up to three passwords so you need to be able to complete two or three levels per game in order to get to the end. Personally I find it impossible to believe that anyone could do this. If I, as naturally gifted as I am, find the going nose bitingly difficult then I'm sure you lot certainly will. You do have to learn the patterns, know what's coming up next, and you do have five lives to help, but its still fiendish. And that's only the start. Out of the next three possible levels, one is virtually impossible, one is almost impossible, and the other is merely very hard.

While not really matching the releases from recent years in terms of outstanding graphics and sound, Necronom is passable to good in all departments, and offers the severest challenge to joystick hotshots since.... um, since the last one.

Graphics

While not as outstanding as some of their older releases the smooth scrolling and interesting sprites are well done. The backdrops are a bit poor.

Sound

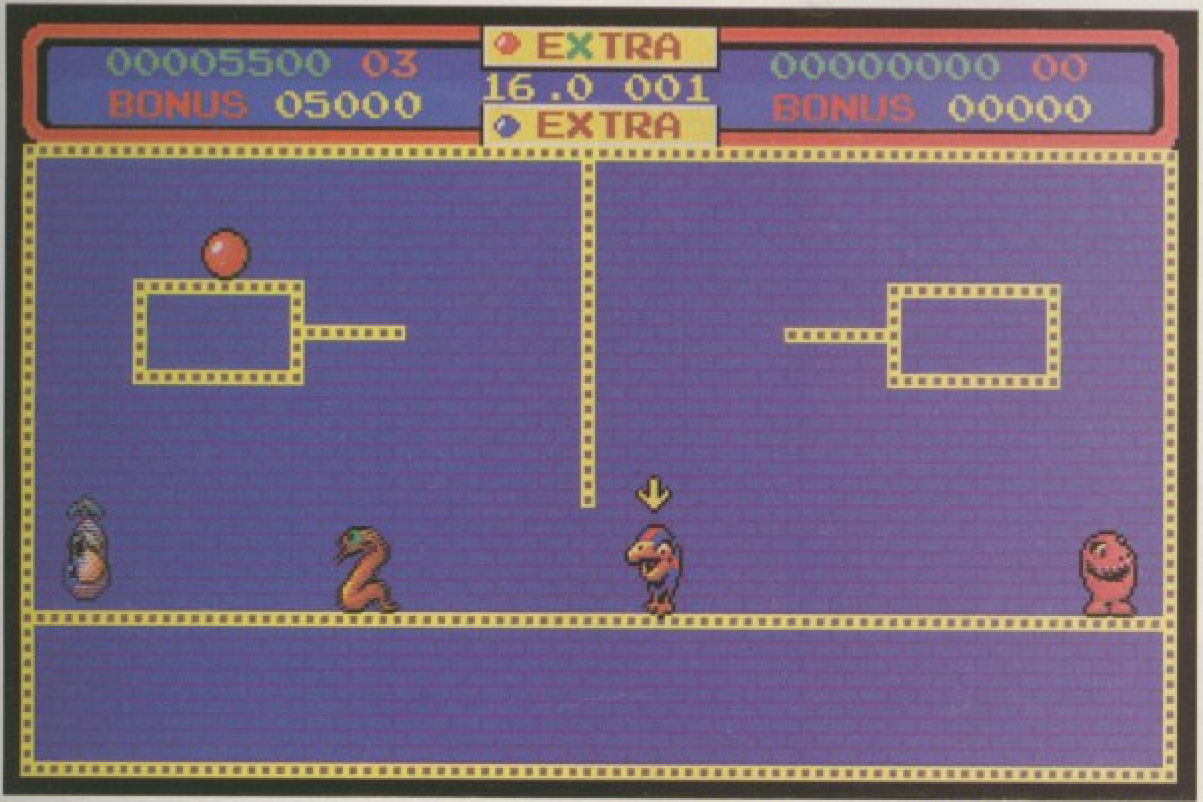
A bit lame really. A definite sense of "I've heard it all before".

Gameplay

Impossible yet addictive, the aim of all shoot-'em-ups. It gets so hard that even a gaming supremo like me is hard pushed to make it past the later levels. There is enough here to keep you going for a fair old while I should imagine.

HELTER SKELTER

Publisher: **Audiogenic** Price: **£24.99**



Graphics

How many different ways are there to animate a bouncing ball? Lots of different monsters but once you've seen one set of bug-eyed things you've really, as they say, seen them all. There is a wonderful built-in editor though.

Sound

Nothing particularly mind-warping in this department I'm afraid.

Gameplay

Controlling your ball is not the easiest thing in the world as I sure you'll vouch. In fact, getting Bobby or Billy ball to bounce in the right places is remarkably difficult and is going to take a lot of practice.

BILLY was a ball, a nice little, red bouncy ball. Bobby was Billy's cousin, and every day they played together in the sunshine, bouncing this way and that between the children and loving every minute of it. One day, they were playing as usual when a big man threw Billy and Bobby at a wall and knocked them out cold.

The next thing that the two balls knew was that they had been grabbed by a man from Audiogenic and had been squeezed into a computer. Now Billy and Bobby are forced to bounce around a screen all day. They'd much rather be playing with the children but instead they are the main characters in Helter Skelter.

This is strange name for this game as there's not one helter skelter in it. Anyway, you might be wondering what it's all about. Well, you don't have to free Billy or Bobby from the computer 'cos you don't have to play the game, but even if you do, that's not the idea.

Billy and Bobby have been employed to rid 80 levels of bug-eyed monsters. If you tire of the 80 levels already available, why not design your own with the built-in

Can you bring the bouncing ball to bare

editor. Each level consists of a number of platforms which are the haunts of monsters. These monsters really aren't doing any harm but your brief is to bounce on them anyway.

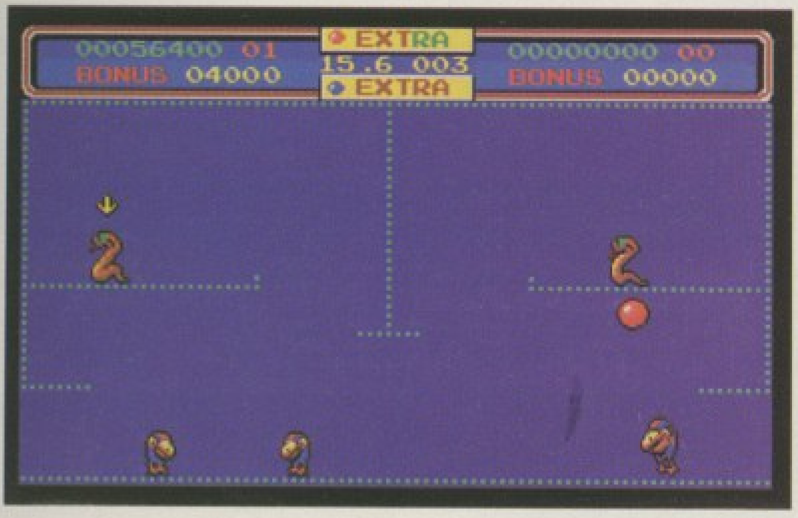
Yes, the object of the game is to get your ball – either Billy or Bobby – to bounce on these poor defenceless creatures who do nothing to harm the environment and really look quite pretty, except for the ones that are really ugly and deserve to be thoroughly thumped.

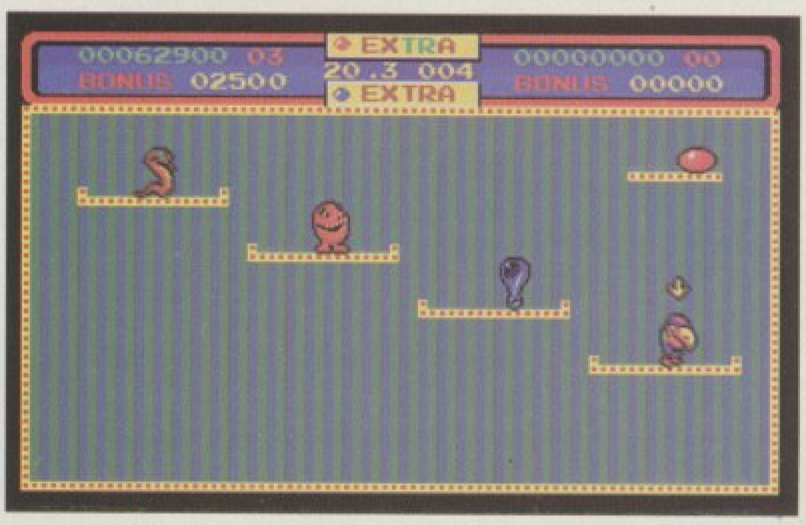
Bouncing on these creatures causes them to vanish, but only if you get the one that's selected by the computer.

If you get one that's not due to be squashed then you simply squeeze it into two monsters and add to your work load.

To add to the trouble, if you get one of these smaller monsters, its partner increases in size. This means that if you hit him again before his turn he will divide into two again.

Helter Skelter is a really fun game. It's damned addictive and is certainly something to sink your teeth into.





THE WORLD'S MOST POWERFU FR

NOW EVEN B



AMIGA ACTION REPLAY SIMPLY PLUGS INTO THE EXPANSION PORT OF YOUR AMIGA AND GIVES YOU THE POWER TO FREEZE MOST ANY PROGRAM

JUST LOOK AT THE UNMATCHED RANGE OF FEATURES

- **SAVE THE ENTIRE PROGRAM IN MEMORY TO DISK**
Special compacting techniques enable up to 3 programs to fit on one disk. Now saves directly to disk as Amiga Dos - reloads independently of the cartridge - even transfer to hard drive! Works with up to 2 Megs of Ram - even 1 Meg Chip Mem (Fatter Agnus).
- **UNIQUE INFINITE LIFE/TRAINER MODE - NOW MORE POWERFUL**
Allows you to generate more and even infinite lives, fuel, ammo, etc. Perfect as a trainer mode to get you past that "impossible" level. Very easy to use.
- **IMPROVED SPRITE EDITOR**
The full Sprite Editor allows you to view/modify the whole sprite set including any "attached" sprites. RANGE OF IMPROVED FEATURES.
- **VIRUS DETECTION**
Comprehensive virus detection and removal features to protect your software investment. Works with all presently known viruses.
- **SAVE PICTURES AND MUSIC TO DISK**
Pictures and sound samples can be saved to disk. Files are saved directly IFF format suitable for use with all the major graphic and music packages. Samples are displayed as screen waveform.
- **SLOW MOTION MODE**
Now you can slow down the action to your own pace. Easily adjustable from full speed to 20% speed. Ideal to help you through the tricky parts!
- **RESTART THE PROGRAM**
Simply press a key and the program will continue where you left off.
- **FULL STATUS REPORTING**
At the press of a key now you can view the Machine Status, including Fast Ram, Chip Ram, RamDisk, Drive Status, etc.
- **POWERFUL PICTURE EDITOR**
Now you can manipulate and search for screens throughout memory. Over 50 commands to edit the picture plus unique on screen status "overlay" shows all the information you could ever need to work on screens. No other product comes close to offerin such dynamic screen handling of frozen programs!!
- **MUSIC SOUND TRACKER**
With Sound Tracker you can find the complete music in programs, demos,etc. and save them to disk. Saves in format suitable for most track player programs. Works with loads of programs!!

WARNING 1988 COPYRIGHT ACT WARNING

Datel Electronics Ltd., neither condones or authorises the use of it's products for the reproduction of copyright material.
The backup facilities of this product are designed to reproduce only software such as Public Domain material, the users own programs or software where permission to make backups has been clearly given.
It is illegal to make copies, even for your own use, of copyright material, without the clear permission of the copyright owner, or the licencee thereof.

NOW

- AUTOF
From the A
autofire fro
Joystick 1
- DISKCO
With the ne
unique coo
else. 'Tag
Very usefu
- PREFER
Action Rep
setup. Cu
use.

MORE FE
- Full M
- Jump
- Show
- Uniqu
- Disk h
- Show

REMEM
"FROZE
- INVAL
OR JUS

Access

FREEZER-UTILITY CARTRIDGE
BETTER!!

AMIGA ACTION REPLAY II

STILL ONLY £59.99
POST FREE
FOR THE A500/1000

A2000 VERSION AVAILABLE £69.99
PLEASE STATE WHICH COMPUTER YOU HAVE WHEN ORDERING

THE NEW MK II VERSION IS HERE!!

NOW WITH A MASSIVE 128K OPERATING SYSTEM IN ROM OFFERING EVEN MORE COMMANDS...

- **AUTOFIRE MANAGER**
From the Action Replay II preference screen you can now set up autofire from 0 to 100%. Just imagine continuous fire power? Joystick 1 and 2 are set separately for that extra advantage!
- **DISKCODER**
With the new "Diskcoder" option you can now 'tag' your disks with a unique code that will prevent the disk from being loaded by anyone else. "Tagged" disks will only reload when you enter the code. Very useful for security.
- **PREFERENCES**
Action Replay II now has screen colour preferences with menu setup. Customise your screens to suit your taste. Very simple to use.
- **DISK MONITOR**
Invaluable disk monitor - displays disk information in easy to understand format. Full modify/save options.
- **DOS COMMANDS**
Now you have a selection of DOS commands available at all times - DIR, FORMAT, COPY, DEVICE, etc.
- **DISK COPY**
Disk Copy at the press of a button - faster than Dos Copy. No need to load Workbench - available at all times.
- **BOOT SELECTOR**
Either DF0 or DF1 can be selected as the boot drive when working with Amiga Dos disks. Very useful to be able to boot from your external drive.

PLUS A MACHINE CODE FREEZER MONITOR WITH EVEN MORE POWER!!

MORE FEATURES INCLUDING 80 COLUMN DISPLAY AND 2 WAY SCROLLING...

- Full M68000 Assembler/Disassembler • Full screen editor • Load/Save block • Write String to memory
- Jump to specific address • Show Ram as text • Show frozen picture • Play resident sample
- Show and edit all CPU registers and flag • Calculator • Help command • Full search feature
- Unique Custom Chip Editor allows you to see and modify all chip registers - even write only registers! • Notepad
- Disk handling - show actual track, Disk Sync. pattern etc. • Dynamic Breakpoint handling
- Show memory as HEX, ASCII, Assembler, Decimal • Copper Assemble/Disassemble - now with suffix names

REMEMBER AT ALL TIMES YOU ARE INTERROGATING THE PROGRAM IN IT'S "FROZEN" STATE WITH ALL MEMORY AND REGISTERS INTACT - INVALUABLE FOR DE-BUGGING OR JUST THE INQUISITIVE!

HOW TO GET YOUR ACTION REPLAY II FAST...

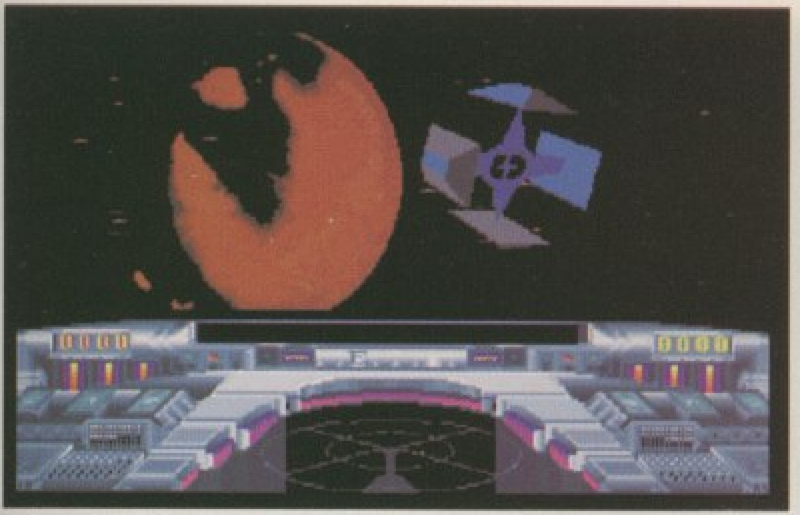
TELEPHONE (24 Hrs) - 0782 744707 - CREDIT CARD ORDERS

Access

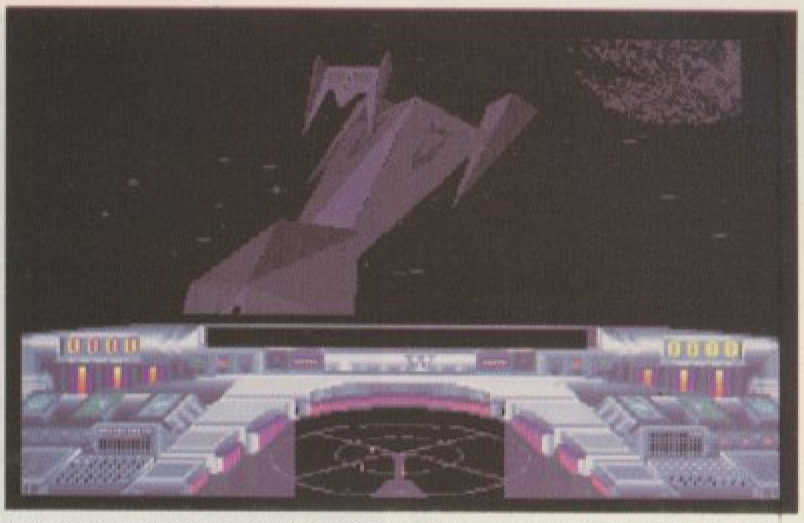
WE WILL DESPATCH YOUR ORDER QUICKLY & EFFICIENTLY TO ENABLE YOU TO START RECEIVING THE BENEFITS OF YOUR PURCHASE WITHIN DAYS, NOT WEEKS. ORDERS NORMALLY DESPATCHED WITHIN 48 Hrs. ALL PRICES INCLUDE V.A.T. ALL CHEQUES/POSTAL ORDERS MADE PAYABLE TO...

VISA

DATEL ELECTRONICS LTD.,
GOVAN ROAD, FENTON INDUSTRIAL ESTATE, FENTON, STOKE-ON-TRENT, ST4 2RS, ENGLAND
TECHNICAL/CUSTOMER SERVICE 0782 744324



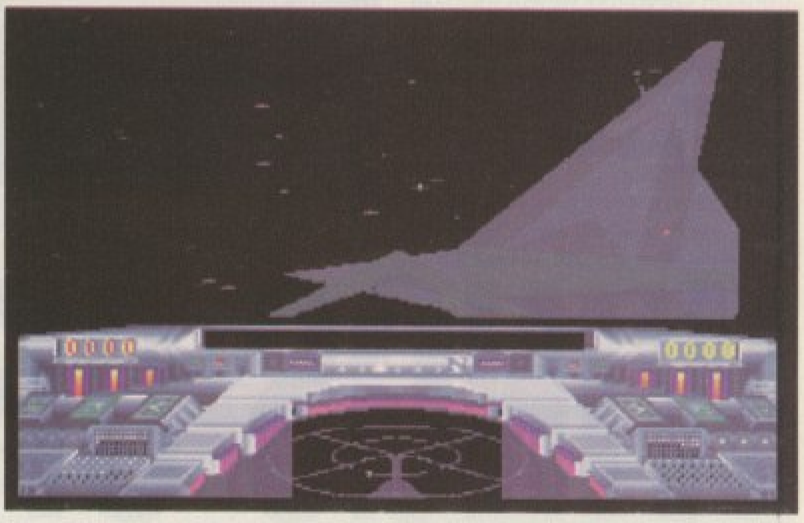
Space stations are your main source of supplies for your ship



Don't think that this ship is an easy target, as it's armed to the teeth



The more ships you shoot, the more credits you get to spend



You haven't got many friends in this system, so keep your eyes open

XIPHOS

Publisher: **Electronic Zoo**
Price: **£24.99**

XIPHOS: What is it, where is it, and if you find it, what do you do with it? The answer to all these questions and more will be revealed thanks to the coldest killer in the universe, the Han Solo of Adlington, yes you've guessed it – me.

The game is based on the continuing struggle between two warring factions in deep space (The Pio and the Qon), both of which are descendants from the same race, which in the distant past was silly enough to delegate total responsibility of running their near perfect world, to their ultimate creation *Xiphos* (booo, hissss).

Xiphos is a somehow familiarly mad entity, and would be villan of the piece. A huge super intelligence, which for reasons best known to itself, after hundreds of years of trouble free service, one morning announced."I quit".

Thereby plunging the now totally dependent Xiphonions into a technological dark age, with no power and no expertise to rebuild their crumbling culture.

You play the part of an undercover agent sent by the Galactic council, of which the Xiphonion system was formerly a member. Your mission is to traverse the six levels of Xiphonion inner space, at the centre of which is Xiphos, not only responsible for the demise of the Xiphons but also suspected of causing strange disappearances and possibly altering the fabric of space time.

In order to travel through the increasingly hostile levels you take on the guise of a wandering mercenary fighting for either side, allied only to maximum profit.

This has a dual purpose, not only disguise, but as the only method of raising sufficient funds via bounty, to buy supplies to continue your quest south, and towards Xiphos via the pole base at the southern end of each level.

Unfortunately travelling south increases an effect similar to gravity which dramatically depletes your energy. If, however, you travel north energy is increased, but it also means you'll be travelling in completely the wrong direction.(Tricky...eh?)

Here lies the trading aspect of the game. After firstly picking your target carefully and dispatching them to the next level of consciousness you will receive your reward, with which you can trade for goods with your victim's opponents.

A map can be built up of the various locations of stations and their allegiances, although this can change due to conquest. The conservation of resources is essential, as running out of energy was the main reason for my regular and early demise.

It's perhaps slightly unfair to compare Xiphos with Starglider II constantly, but it's almost unavoidable with the graphic similarity and the general scenario. Nevertheless I still feel the program lacks depth, being essentially a multi-level shoot-em-up, with a bit of simple trading for good measure.

Graphics

When I first loaded the game and flicked through the manual, my first thought was, *"Great!... At last, Starglider III or there abouts"*. Unfortunately that's not the case. The graphics are very similar, the backgrounds being very impressive and, with the possible exception of the tractor beam which looks like it was stolen from a speccy, they're great.

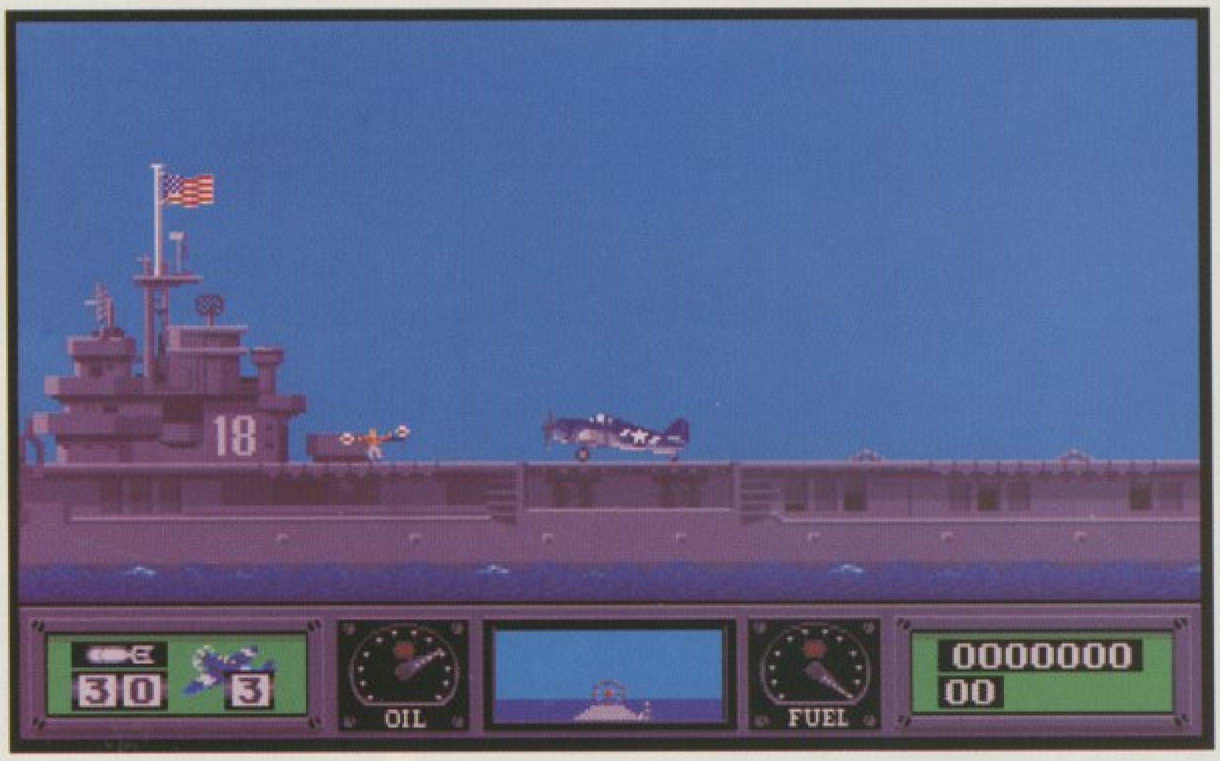
Sound

The fairly usual run-of-the-mill pings and explosions. A few years ago they would have been great but they all seem a little too familiar now.

Gameplay

The dog fights are perhaps a little too tricky, making the accumulation of the required credits and as a result, the purchase of essentials, simply a little too hard.

This is the only time you are safe (well, relatively anyway). Fuel up, arm your plane and get at'em!



WHEN I was younger and thought that my Tandon PC was a really nice state of the art piece of gear I had one game that was my most favourite of all. Many of the more sentient of you will never have heard of this game – in fact many of you may not have heard of PCs.

Anyway, the name of this game was Sopwith, and the plot was quite simple. Piloting your plane from an elevation viewpoint (side on) you had to engage in dogfights with enemy craft and drop bombs on cities and gun emplacements until everyone had had enough.

WINGS OF FURY



Publisher: **Domark** Price: **£24.99**

This was by far the best game I ever played on the PC and probably the game I have played the most on any machine. And this was on a nasty monochrome monitor running a CGA simulator. How much better, I remember thinking to myself, this game would be if it had graphics and sound.

Somewhere else across the universe of thought someone must have had a similar, if not the same, idea – here comes Wings of Fury!

The plotline has been developed somewhat. You are the pilot of a Hellcat, operating from an American carrier in the Specific Ocean around 1945.

This is an unpleasant place to be because the place is swarming with Japanese. That's not to say that the Japanese aren't nice people these days. I mean, in WWII they murdered and tortured civilians, summararily executing those who stood in their way. These days all they do is torture and murder business with high import taxes and murder, torture and eat endagered species – no comparison really.

The aim is to eradicate the enemy by destroying their island bases and sinking their ships. Air

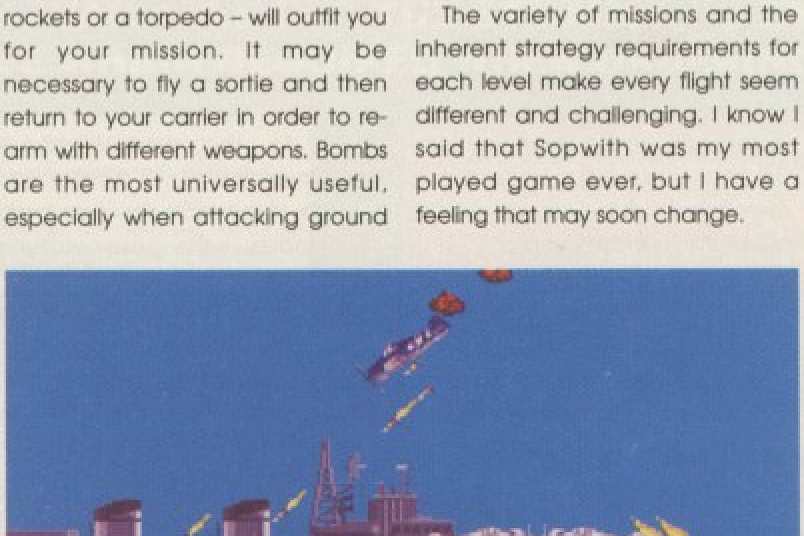


combat may ensue, sneaky Zeros (which were manufactured by Mitsubishi as a matter of interest) defend some islands and most ships.

A choice of weapons – bombs, rockets or a torpedo – will outfit you for your mission. It may be necessary to fly a sortie and then return to your carrier in order to re-arm with different weapons. Bombs are the most universally useful, especially when attacking ground installations. Rockets seem to be rather haphazard and innaccurate whereas torpedos are incredibly unreliable and obviously only useful for sinking ships. Remember you have machine guns for dogfights and those all important straffing runs.

Landing back on the carrier is quite difficult. The problem can be compounded if your plane has received a bit of a pasting from the Nips' Ack-Ack or the odd Zero. One slip, one fatal slip and it's goodnight Singapore.

The variety of missions and the inherent strategy requirements for each level make every flight seem different and challenging. I know I said that Sopwith was my most played game ever, but I have a feeling that may soon change.



Graphics

Excellent. They really are. The animation of the plane as it climbs and dives is more than made up for by the excellent effects as enemy soldiers are pinned to the ground by a well timed burst of cannon. A triumph of the pixel sculptor's art.

Sound

The sound effects may seem a bit tame.. The tune is quite stirring but uses the same boring old samples that have been around for years. The best effect is, if you'll excuse the gore, the squeal of an infantryman as he gets shot or a 100lb bomb lands in his vicinity.

Gameplay

This is a game that attacks the central nervous system directly. it ovverides all other considerations except massive doses of coffee to enable you to work nine-to-five and play six-to-eight. The control of the plane is a little difficult to get the hang of at first, but the Hellcat was a difficult plane to fly in reality anyway.

NIGHTBREED – THE INTERACTIVE MOVIE

Publisher: **Ocean** Price: **£24.99**

Graphics

The wide range of graphics featured in Nightbreed make it a very appealing game. Some of the still screenshots are particularly effective in conveying the eerie atmosphere needed. The few arcade sequences are animated nicely and as a whole the presentation is first-class.

Sound

The main theme music takes the form of a haunting little ditty that accompanies the game well. The numerous spot effects enhance the atmosphere until you believe you could almost be there.

Gameplay

Despite excellent presentation, Nightbreed suffers from being somewhat shallow in its gameplay. Although there's a lot to see, the challenge is rather lessened by the fact that all the puzzles can be solved using a trial and error system. All in all, Nightbreed falls just short of the mark and rates as a disappointing piece of software.



While searching around the cemetery you are bitten and infected by Peloquin. You must run for your life or be completely devoured.

HAVING been endlessly questioned and heavily sedated, Aaron Boone tried to take his own life. Somehow his psychiatrist had concluded that he was responsible for 11 particularly gruesome murders – none of which Boone could recall.

As he lept in front of the oncoming truck all Boone could think of were the grotesque pictures Decker had shown him. Anyone who could perform such butchery didn't deserve to live – the truck hit.

Boone regained consciousness in a white room. Where was he? Heaven? Hell? No, having been struck by the truck, Boone's body was thrown to the side of the road. He had been rushed to the local hospital with no more than a few serious bruises to show for the suicide attempt.

It was while Aaron Boone convalesced that he encountered a somewhat disturbed character by the name of Narcisse. It was from this strange being that Boone first heard of a place known as Midian, a hidden city where monsters of all denominations live in peace. Decker, Boone's psychiatrist, had convinced him that he was indeed a monster. Midian seemed the natural place for him to go. That night, Boone escaped from the hospital.

Using Narcisse's somewhat sketchy directions, Boone found his way to an abandoned cemetery. Surely this couldn't be the place. It was then that Boone felt a sharp pain in his shoulder. Someone or something sank their teeth into his already battered body. Running for his life, Boone managed to escape the clutches of his attacker only to run headlong into the hands of Decker and the police. Boone heard a volley of gunfire and fell to the ground, dead.

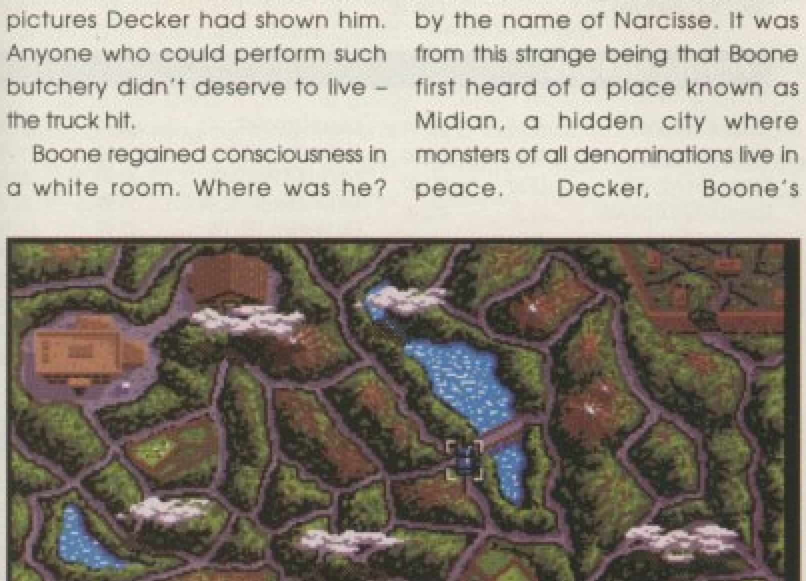
You play the role of Aaron Boone in search of the wondrous world of Midian. The game follows the film's storyline to the letter and as you progress further into the game you'll find yourself in some pretty hairy scrapes. Your ultimate goal is to prove your innocence and reveal the identity of Mask, the real killer, to the world.

In order to succeed you'll need to call upon the help of the inhabitants of Midian, the Nightbreed.

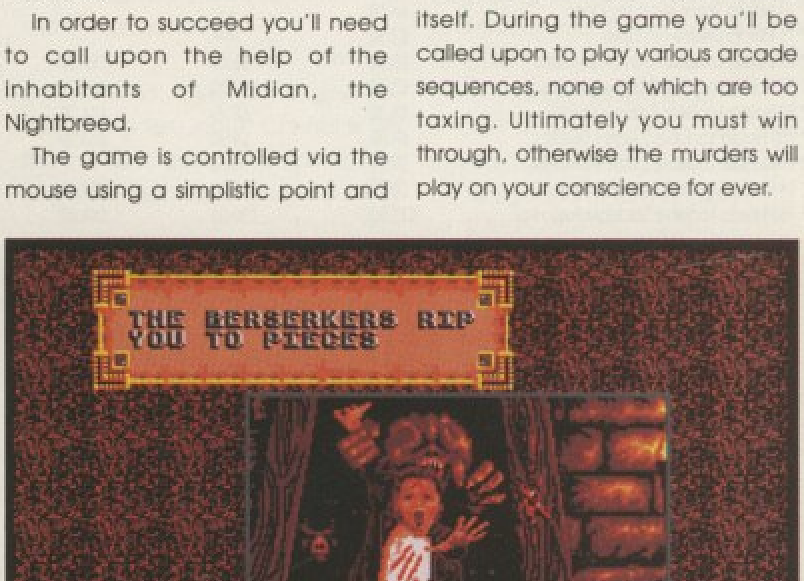
The game is controlled via the mouse using a simplistic point and



click style method. The action is split into two distinct stages, the road to Midian and the underground city itself. During the game you'll be called upon to play various arcade sequences, none of which are too taxing. Ultimately you must win through, otherwise the murders will play on your conscience for ever.



You must get around the surrounding area by car. Be sure to watch out for police roadblocks.



Upon entering Midian, the members of the Nightbreed do not recognise you as one of their kind and tear you to shreds.

Access

DEAL DIRECT

VISA

24 HOUR HOTLINE 0533 471485 OR 0533 545732

MINIMUM ORDER FOR FREE DELIVERY £29.00 ALL ORDERS UNDER £29.00 ADD £3.90 P&P

MEMORY EXPANSIONS

Amiga 0.5 Mb A501 Ram Expansion and Clock (Commodore's own brand)	£89.99
Amiga 0.5 Mb Ram Expansion, memory disable switch, 16 chips on board version without battery backed up clock	£34.99
Includes Chipmem option - version with battery backed up clock	£39.99
Amiga 0.5 Mb Ram Expansion, memory disable switch, video retail packaging	
Version without battery backed up clock — 4 chip board	£34.99
Version with battery backed up clock — includes chipmem option	£39.99

Amiga 1.8 Mb Ram Upgrade Board, including clock and disable switch.		
Complete 1.8 Mb board fully configured to 1.8 Mb with lead		£214.00
Separates 1.8 Mb board configured to 512k		£89.00
Gary lead (needed if configuring greater than 512k)		£19.99
Additional 512k Ram Expansion Chipsets		£35.00
Amiga 0.5 Mb Ram Expansion Chipsets for A590 hard drive unit		£35.00
Amiga 500 4.0Mb Ram Upgrade	Populated to 0.0Mb	£99.99
Amiga 500 4.0Mb Ram Upgrade	Populated to 4.0Mb	£299.99
Amiga 8.0 Mb External Ram Upgrade Board	Populated to 2.0 Mb	£299.00
Atari Ste 0.5 Mb Ram Expansion Boards, fitted internally		£49.99
Atari Ste 2.0 Mb Ram Expansion Boards, fitted internally		£148.99

(We may be able to pay you for your existing STe internal memory)

AMIGA PERIPHERALS

Amiga "Fatter Agnus" Chip (8372A) enables up to 1 meg chip ram	£60.00
Amiga 1.3 Kickstart Rom Upgrade for A500/2000 (Hard drive auto boot)	£33.00
Amiga Vidi, video frame grabber unit	£99.95
Amiga Virus Protector Hardware, protects from bootblock virus	£14.99
Amiga Boot Selector Cards (choose to boot from DFO or DF1)	£12.95
Amiga Electronic Boot Selector (Boot from DFO to DF3)	£39.00
Amiga Kickstart Selector, supplied with Kickstart Rom (1.2 or 1.3)	£49.00
Amiga Kickstart Selector, supplied without Kickstart	£20.00
Amiga MM3000 Midi Interface (in, thru, out)	£22.99
Amiga Action Replay Cartridge, backup cartridge, inc mcode, monitor	£59.99
Amiga Syncro Express II - duplication system — including second drive	£104.00
requires a second drive — without second drive	£34.99

3.5" BULK DISKS

	10	30	50	100	200
3.5" DSDD 135 TPI 1 Meg 880k Mitsubishi/JVC/TDK	£3.99	£11.70	£18.75	£37.00	£71.00
3.5" DSDD 135 TPI 1 Meg 880k Sony	£4.99	£14.70	£24.00	£44.00	£83.00
3.5" High Density - made in Japan	£9.99	£29.00	£47.50	£89.99	£169.99
3.5" DSDD 135 TPI branded Microsoft	**£4.99**	**£14.70**	**£24.00**	**£44.00**	**£83.00**
3.5" DSDD branded Sony/3M/Dysan/TDK	£8.50	£25.00	£41.00	£80.00	£149.00
3.5" High Density - Sony/3M/TDK	£14.99	£44.50	£72.50	£142.00	£280.00

3.5" DISK STORAGE BOXES

	1	2	3
3.5" 12 Holder Solid Plastic extra strong Slimpak	£0.75	£1.40	£1.80
3.5" 10 Holder vision 10 See Through	£0.85	£1.60	£2.10
3.5" 10 Holder Space Micro Fan Open	£4.50	—	—
3.5" 15 Holder Datafile Fan Open	£3.50	—	—
3.5" 40 Holder Lockable 2 Keys + Dividers	£3.50	£6.60	£9.30
3.5" 50 Holder Lockable 2 Keys + Dividers	£3.80	£7.20	£10.20
3.5" 80 Holder Lockable 2 Keys + Dividers	£4.30	£8.20	£11.70
3.5" 100 Holder Lockable 2 Keys + Dividers	£4.80	£9.20	£13.20
3.5" 120 Holder Lockable 2 Keys + Dividers	£7.99	— POA —	
3.5" 94 Holder Lockable Stackable Banx	£8.99	£17.00	£24.00
3.5" 150 Holder Lockable Stackable Posso Box	£15.50	£30.00	£44.00

3.5" DISK LABELS

	4 colour Rainbow	Single colour State Colour	Tractor fed Single Colour
50 X 3.5" Labels	£2.00	£1.50	£1.80
1000 x 3.5" Labels	£8.99	£5.99	£8.99
Copy Holder Adjustable Moving Arm swivel 80 column			£12.99
3.5" Disk Cleaning Kit with fluid			£1.50
14" Monitor stand Tilt 'n' Turn – Turn 360 + Tilt 25 Degree			£11.50
Mouse House – includes sticky pad			£1.50
6mm Top Quality Mouse Mat			£1.50
6mm Top Quality Antistatic			£1.99
Printer Stand 80 Column 1 piece safety coated			£9.90
Printer Stand 2 piece – Universal			£5.00

AMIGA 500 COMPUTER DEALS – FREE DELIVERY

Amiga 500 standard pack includes a 500 computer 512k Ram - 1Mb disk drive - mouse - TV modulator - power supply - operation manuals & workbench disks etc. Everything you need to start only	£339.95
Amiga 500 Batman pack - (as standard pack) plus Batman the Movie - F18 Interceptor - New Zealand Story - DeLuxe Paint 2 - Special Price	£359.95
Amiga 500 Flight of Fantasy pack - (same as standard) plus F29 Retaliator - Rainbow Islands - DeLuxe Paint 2 & Escape from the Planet of Robot Monsters - Special Price	£359.95
Amiga 500 Screen Gems pack - (same as standard) plus - Days of Thunder - Shadow of the Beast II - Back to the Future Part II - Knight Breed - Deluxe Paint II - Special Price	£359.95
Amiga 500 Class of the 90's Educational pack - (same as standard) plus educational extras	£519.00
Amiga 590 Hard Disk Drive	£359.00

AMIGA TENSTAR SOFTWARE PACK

Software pack - includes the following titles - Mercenary, Insanity Flight, Amegas, Art of Chess, Thundercats, Barbarian, Terrorpods, Wizball, Buggy Boy & Ikari Warriors **£22.95**

POWER SUPPLIES

Amiga Power Supply 30% more power drives more disk drives	£39.99
Amiga Power Supply - Standard	£37.00
Atari ST Internal Power Supply (direct replacement) P.C.B. unit	£39.99

DUST COVERS

Star LC 10 printer dust cover	£4.99
Printer dust cover 80 column	£4.50
Amiga A500 dust cover	£2.50
Atari ST dust cover	£2.50

Many more dust covers available to order

ACCESSORIES

Amiga 4 player adaptor	£4.99
Atari ST 4 player adaptor	£4.99
Amiga 3.5" Teac or Cumana 880k external disk drive	£64.95
Amiga & Atari 2 metre joystick/mouse extension	£3.99
Amiga & Atari twin joystick extension lead	£3.99
Amiga & Atari null modem cable connects Amiga - ST/Amiga - Amiga/ST - ST	£9.99

PRINTERS – FREE DELIVERY

Star LC10 Mono Printer	154.99
Star LC10 Colour Printer	£194.99
Amiga Parallel Centronics Printer Cable	£3.99

PRINTER RIBBONS

	1	5
Brother M1009, 1109	£2.50	£11.99
Canon PW 1080 A	£2.99	£12.99
Commodore MPS 801	£2.50	£11.99
Epson LX/LQ 800 LQ 500	£2.30	£10.99
Epson FX/LQ 1000 LQ 1050	£2.99	£12.99
Epson MX/FX/RX/NX80	£2.50	£11.99
Shinwa CP 80/Legend 808	£3.50	£16.50
Star LC10 mono	£1.90	£8.99
Star LC10 longer lasting	£2.50	£10.99
Star LC10 mono original	£3.80	£17.99
Citizen 120D 180E	£2.99	£11.99
Commodore MPS 803	£2.50	£11.99
Epson LX 80/86 GX80	£1.90	£8.99
Oki Microline 80, 82, 90	£1.99	£9.99
Oki Microline 182, 192	£1.99	£10.99
Panasonic KXP 1081/90	£2.50	£11.99
Star LC 24/10	£2.99	£12.99
Star LC10 colour	£5.50	£24.99
Star LC10 orig colour	£6.50	£29.99
Star NL/ND/NR 10	£2.99	£12.99

Many more ribbons available to order

JOYSTICKS

Cheetah Exterminator	£4.99
Cheetah 125	£6.99
Cheetah Mach 1	£9.99
Cheetah Starprobe	£10.99
Competition Pro 5000	£10.99
Competition Pro Extra	£12.50
Konix Navigator	£10.99
Konix Speedking	£8.99
Zipstick Super Pro	£10.50
Zipstick Super (Autofire)	£10.99
Quickshot II Turbo	£8.99
Quickshot III Turbo 130	£9.99
Quickshot 129N Spaceage	£8.99
Quickshot 127 Infrared	£34.99
Quickshot 128 Arcade	£18.99
Quickshot 131 basic model	£6.99

ALL GOODS SUBJECT TO AVAILABILITY • PLEASE ALLOW 5-28 DAYS DELIVERY

PLEASE MAKE CHEQUES PAYABLE TO:

C.D.R. LTD, Unit 22, Sykefield Avenue, Leicester LE3 0LB

Other payment methods: Access, Visa, Barclaycard, Postal Order

To speed up delivery please write cheque guarantee card number on back of cheque

Having visited the shepherds, you are captured by a ferocious looking dragon. If only you had a spell to render him harmless...



LOOM

Publisher: **Lucasfilm**
Price: **£24.99**

IT was long after the passing of the second shadow, a time when huge dragons ruled the twilight skies, that human-kind began to thirst once more for domination over nature. Their weapon in the fight was industry, a skill they wielded with great confidence. As man unravelled the mysteries of light and darkness his power and knowledge grew in accordance. Soon, entire nations believed nothing lay beyond the powers of their own arrogance.

Competition proved fierce, skilled labour was a valuable commodity and tradesmen joined together in order to protect their valuable secrets. These professional societies swelled as their memberships grew and a few of them, notably the blacksmiths and clerics, acquired vast territories with private armies to defend them. Thus the age of the Great Guilds was born.

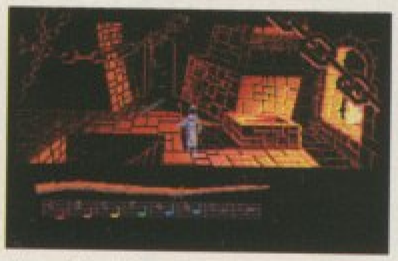
One guild, the weavers, were not interested in the acquisition of land and greatness; they simply wanted to advance their art. In an effort to break away from the rest of mankind, they isolated themselves on an island that became known as Loom.

As time passed, the weavers did indeed advance in their skills. In fact, the art of weaving more than improved – it became magical! By spinning the threads in certain ways, the guild members found they could cast different spells.

Using the great loom, the guild wove great magical tapestries until one day a young female weaver managed to weave a child. Rather than welcoming this magical event, the Elders of the Guild became angry.



You find yourself travelling down a twisty mountain path. Things would be far more simple if the road was straight



The blacksmiths are making weapons for the warlike clerics. Using your specialised skills you must stop their industrious fever.

They banished the young woman from the island of Loom and the babe was taken into care. Seventeen years have passed, the weavers' magic has begun to fail. The Loomchild has been summoned by the Elders, the adventure has begun.

Loom is unique among adventures. Like some games, there is no text input. Control is via the mouse, using a simple point and click technique. Magic is a key part of the game and spells are cast by forming combinations of musical notes found upon your mystical Distaff.

You play the role of Bobbin, the Loomchild. The sacred loom has been broken and the magical powers of the weavers are beginning to wane. Your mission is to venture into the industrial world to discover the reason behind these strange happenings.

Only when you prove successful in your task will the island of Loom be restored to its former glory.

Graphics

The graphics found within the world of Loom are first-class. The scenery is expertly drawn, almost to a point where you begin to believe the place actually exists. The animation on the sprites is excellent and the programmers have included a variety of subtle movements that further enhance the game's overall appeal.

Sound

Loom features a whole selection of intricate tunes, all choreographed to tie-in with what's going on onscreen. The hundreds of different sound effects enhance the gameplay and the help maintain maximum atmosphere.

Gameplay

Loom is more than just a game. As progress is made though the story it becomes apparent that what you are in fact playing is an interactive story. Unlike other adventure games, the point and click system does take a little getting used to. However, once mastered, progress can be quickly made. The game's only real shortfall is the fact that the puzzles can be solved largely by trial and error, thus lessening the challenge somewhat.



The shepherds seem to be experiencing a little bit of bother with a great dragon eating their flock. Can you help out?



Mandible, the head of the Clerics, sees his ambition to rule the world get blown away as he raises an evil spirit.

A watery duel ensues as Bond battles against one of Stromberg's evil henchmen. Too many collisions and your craft will sink.



Taking jumps at an angle can cause some hilarious effects. Two wheel driving may look fancy, but it's very dangerous!



Deep sea capers ensue when Bond's minisub is attacked by the meglomaniac's army of underwater assassins.



THE SPY WHO LOVED ME

Publisher: **Domark** Price: **£24.95**

RATHER than opt for the latest James Bond licence, Domark have decided to recreate one of 007's earlier escapades. Pandemonia breaks out when both an American and a Soviet submarine disappears. Who can be behind this terrifying global take-over bid? No one knows for sure, but the British Secret Service are on the case and assign their most famous agent, James Bond, 007, licenced to kill.

The brains behind the "kidnapping" of the two nuclear subs is none other than the wealthy industrialist, Karl Stromberg. It seems Mr. Stromberg wants to create a better world and, from his undersea fortress of Atlantis, he has sent an ultimatum to the world's two superpowers. Either they pay him the equvalent of Brazil's national debt or he nukes Hollywood and Red Square; it's hardly cricket.

Naturally, Bond is deployed to put paid to the meddlesome maniac's preposterous plan. En route he teams up with the KGB's ace agent and together they set out to reclaim the stolen subs. Of course, Stromberg is none too pleased at their intervention and decides it might be best if both 007 and his friend take a short vacation in a lead-lined box.

Racing through the winding roads of Sardinia (Spy-Hunter style), Bond is attacked from all angles. Using his finest driving skills he manages to elude capture before his Lotus Esprit transforms into a speed boat and the chase continues over water.

En route Bond may collect numerous "Q" tokens. These may be exchanged for vehicle enhancements such as paint sprays and smoke screens. Q's creative mind has thought of an even greater option – the ability to change your Lotus from a racey sports car into a highly manouverable minisub. This latter metamorphis proves vital when you drive headlong off a nearby jetty.

So the action continues with Stromberg throwing everything he has at his disposal in the path of the relentless Bond. The chases take place on land, on sea (using both a boat and a jet ski) and under the ocean waves. Eventually, if 007 is worth the tax-payer's money, he wins through and saves the day. Stromberg, being something of a lilly livered coward, hops off somewhere. Leaving Bond to fight it out with his oversized bodyguard, the steel-toothed, Jaws.

Who will be victorious? 007's fate lies in your hands.



Graphics

Although the sprites are somewhat smaller than normal, no details have been omitted. The game is presented very nicely and the scrolling is particularly smooth. Because of the numerous different levels, there are also a nice variation of things to see.

Sound

No Carly Simon here, Domark have taken the original Bond theme and souped it up somewhat in the form of a special house remix version. The spot effects are well implemented and work well. As the song goes, nobody does it better.

Gameplay

Despite backtracking somewhat, Domark have produced a first-rate game that incorporates both Spy Hunter and Operation Wolf-style gameplay. Difficulty has been set at just the right level, allowing players to progress each time they play.

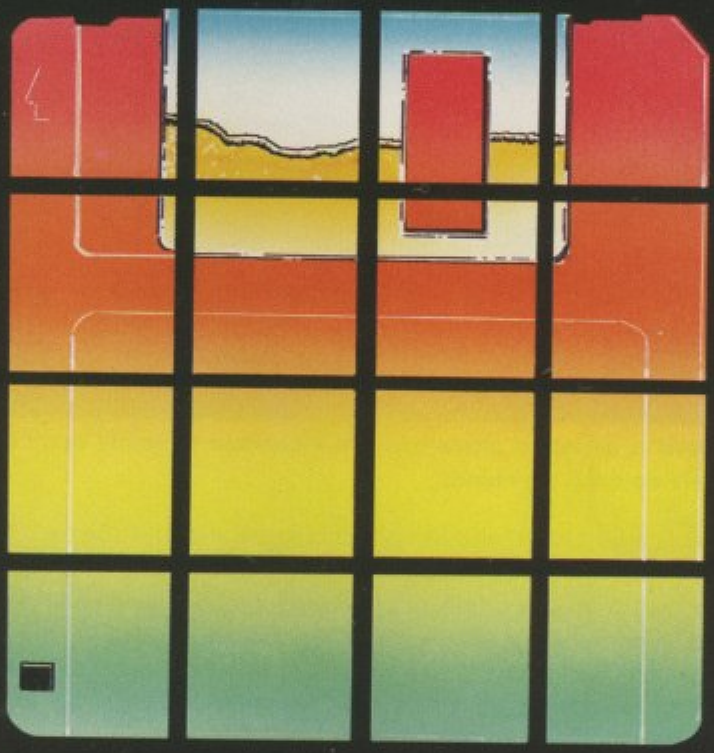
EUROPES BIGGEST 16 BIT DEDICATED EVENT

The 3rd 16 Bit Computer Fair

4 - 5 - 6
JANUARY
1991
SHOW OPEN
0-6 EVERYDAY
CLOSES 4PM
SUNDAY 6th

NEW LARGER VENUE
NOVOTEL HOTEL HAMMERSMITH LONDON W6
NEAREST TUBE STATION
HAMMERSMITH
(PICCADILLY,METROPOLITAN & DISTRICT LINES)
ORGANISERS WESTMINSTER EXHIBITIONS LTD
SURREY HOUSE,
34 EDEN STREET
KINGSTON,
SURREY. KT1 1ER
PHONE 081-549-3444
FAX 081-547-1311

THE ONLY EUROPEAN SHOW DEDICATED TO THE SERIOUS & NTERTAINMENT SIDES OF THE ST & AMIGA



OVER 140 EXHIBITORS INCLUDING
ADAMSOFT, ADVENTURE SOFTWARE
AUDIO VISUAL RESEARCH
CASPELL COMPUTERS,
CAVENDISH DISTRIBUTION
CHECKMATE SYSTEMS, COMPUTER MANUALS
DS&K DESIGNS, ENSONIQ
ECLIPSE COMPUTER SUPPLIERS
FRONTIER SOFTWARE, GFA MEDIA DATA
GASTEINER TECHNOLOGIES
H.B. MARKETING, HI-SOFT, HI-TEC MODEMS
INFOGRAMMES, INTERCEPTOR, KUMA
LOGIC SALES, MEMORY EXPANSION SYSTEMS
MICRO MART, MICRODEAL, MUTANT SOFTWARE
NADI SYSTEMS, PANDAAL MARKETING
POWER COMPUTING, PROTON SOFTWARE
PSYGNOSIS, RAD TECHNOLOGY
RIVERDENE PDL, SILICA SHOP, ST CLUB
SIREN SOFTWARE, SOFTWARE SELECTION
STAMPEDE, TAKE CONTROL, U.S ACTION
U.S GOLD, VIDEK

SAVE TIME & MONEY BY PRE-PURCHASING A FAST LANE TICKET BEFORE DECEMBER 17th

SAVE
2 PER
ICKET
E-PURCHASE
UR TICKETS
ND SAVE
25%
F REGULAR
OOR PRICE

SAVE £1 PER TICKET

REGULAR TICKET PRICE £5 (At door or after December 17th)
FAST LANE TICKET £3 (Purchased before December 17th)
CHILDREN UNDER 10 ADMITTED FREE WITH ADULTS
POST TO - 16 BIT FAIR, P.O.BOX 68 ST AUSTELL, PL25 4YB
PLEASE SEND ME..........FAST LANE TICKETS AT £3 EACH

CHEQUE/ P.O. ENCLOSED FOR £......................MADE PAYABLE TO 16 BIT FAIR

NAME..

ADDRESS..

....POSTCODE.......................

OR PHONE **0726 68020** With Credit Card No.

FAST LANE TICKET HOLDERS HAVE THEIR OWN PRIORITY ENTRANCE
A " FAST LANE TICKET HOLDERS ONLY" ENTRANCE WILL BE SITUATED ON THE 1st FLOOR OF THE HOTEL ADJACENT TO THE RECEPTION DESK. TAKE NO NOTICE OF THE QUEUE OUTSIDE, SIMPLY WALK INTO THE HOTEL LOBBY.

SHADOW OF THE BEAST II

Publisher: **Psygnosis** Price: **£34.95**

SHADOW of the Beast II is very similar to its highly acclaimed predecessor. However, Psygnosis have listened to the comments made about the first game and improved upon them for this, the second instalment of the Beast saga.

Having fought your way across the plains, you managed to reach the killer of your father, the Beast Mage, Zelek. A long and arduous battle ensued and as the sun set in the east only one shadowy figure remained standing. Against all odds you had defeated the powerful wizard and avenged the death of your once proud father.



The forest is a sacred place and the tribesmen certainly don't like intruders violating their lands.

As time passed, people moved to the furthest reaches of the land in search of a more bountiful life. What with the Mage long since deceased the peasants slept safely in their beds, or so they thought...

One terrible night, high on mountain top, the silhouette of a lone figure could be made out against the dark night sky. As rain poured out of the sky and lightning flashed all around the strange figure raised a staff causing weird electrical currents to run all over his body. The figure turned and twisted until it had become a hideous winged creature. Gliding effortlessly down from the mountain, the creature swooped over a lonesome cottage ripping off the roof as though it were made of straw.

Inside a baby screamed as its mother looked upwards. A menacingly huge hand reached in and grasped the babe. The creature took off into the distance, leaving the poor woman all alone in the darkness.

So it was that the Beast Mage returned, taking your only son in the process. There was no question what you must do, even without your Beast powers you must travel to the Kara-Moon, defeat the Mage and rescue your heir.

Beast II looks quite similar to its predecessor. That is, it takes the guise of a platform-style game come beat'em-up. The two main differences between the two Beast games are that this second instalment is much bigger and it requires far more lateral thinking and puzzle solving. Players may now collect coins to spend on needy provisions. Clues can be gleaned by asking the inhabitants of Kara-Moon probing questions. You may even barter objects in return for information and help.

One thing that hasn't changed is the Beast-ly T-shirt found accompanying the disks.

Graphics

Psygnosis pride themselves on producing state-of-the-art graphics. Shadow of the Beast II has to be their best yet. Superbly animated creatures inhabit the land of Kara-Moon and the landscapes are truly breathtaking, especially when you see the amazing 13 levels of parallax scrolling. In a word, Brilliant!

Sound

The haunting theme tune sets the atmosphere perfectly. The many sound effects are varied and extremely well implemented. Even the "game over" sequence is a joy to listen to with its impressive guitar solo.

Gameplay

Shadow of the Beast II is a first-rate arcade game. Control is via the joystick and moving around Kara-moon couldn't be easier. The puzzle solving element adds a hidden depth to the game and definitely increases its lasting appeal. When you combine the top-quality presentation and the superb gameplay you've got one heck of a game.



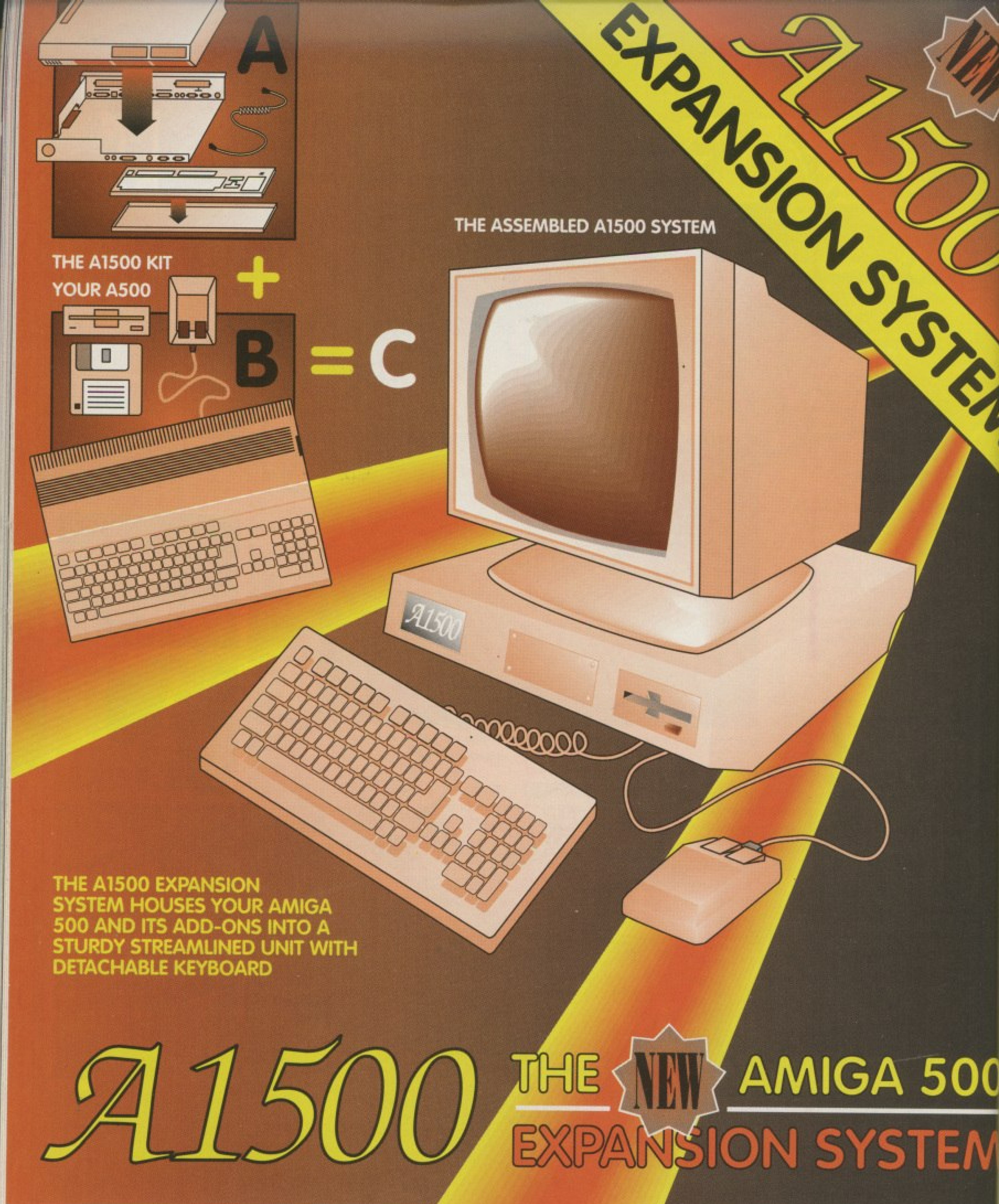
Chests contain health-giving potions and valuable cash. But they're guarded by huge monsters which must be slain first.



Puzzles and traps abound. If I were you I'd kill that menacing giant before he pushes the spiked block your way.



Sullivan Bluth Presents
DRAGON'S LAIR II
TM
TIME WARP
Amiga
Atari ST
IBM PC
Macintosh
Princess Daphne has been spirited away to a wrinkle in time by the evil wizard Mordroc who plans to force her into marriage. Only you, Dirk the Daring, can save her.
Transported by a bumbling old time machine, you begin the rescue mission. But you must hurry, for once the Casket of Doom has opened, Mordroc will place the Death Ring upon Daphne's finger in marriage and she will be lost forever in the Time Warp.
Be the first to play the all new Don Bluth animated adventure! Dragon's Lair II: Time Warp features full-screen animation and digitized sound with more scenes than any previous animated adventure.
"Dragon's Lair II: Time Warp" is a trademark owned by Bluth Group, Ltd.; ©1990 Bluth Group, Ltd.; used under license from Sullivan Bluth Interactive Media, Inc.; Character Designs ©1983 Don Bluth; ©1990 all audio, visuals and concept - Sullivan Bluth Interactive Media, Inc. ALL RIGHTS RESERVED; Programming ©1990 ReadySoft Incorporated.
4 The Stannetts • Laindon North Trade Centre • Basildon • Essex • SS15 6DJ • Telephone Number 0268 541126 • Facsimile Number 0268 541125
ReadySoft Inc.


A1500
NEW
EXPANSION SYSTEM
A
THE A1500 KIT
+
YOUR A500
B
= C
THE ASSEMBLED A1500 SYSTEM
A1500
THE A1500 EXPANSION SYSTEM HOUSES YOUR AMIGA 500 AND ITS ADD-ONS INTO A STURDY STREAMLINED UNIT WITH DETACHABLE KEYBOARD
A1500
THE NEW AMIGA 500
EXPANSION SYSTEM

Commodore

1990

CHRISTMAS SHOW

Official SHOW GUIDE

10am – 5.30pm November 16, 1990
10am – 5.30pm November 17, 1990
10am – 4.30pm November 16, 1990

Novotel • Hammersmith • London

Bigger – and better!



Welcome to Commodore's 15th Christmas Show. This year we have built on last year's success and made the show bigger and better than ever.

As the number one company in home and leisure computers we have brought in some of the country's biggest software houses who will be showing their latest Christmas offerings such as Robocop 2 from Ocean and Line of Fire from US gold.

Along with Psygnosis, Domark, Mirrorsoft, Mindscape, Elite and Electronic Arts a whole host of exciting titles will be available for your Amiga and Commodore 64. Many titles will also be making their debut on cartridge for the brand new C64 Games system.

None of this would be complete without the opportunity to try out all these new developments and Commodore alone is providing a games arcade with over 20 systems. Courtesy of our distributors and dealers most of what you see will be on sale at highly competitive prices.

Finally, I would like to thank all our Commodore users for the marvellous support they have given us over the past year, and wish you all an enjoyable show.

Stephen Franklin
Managing Director

Stand by Stand Guide

Stand 2

Arnor

611 Lincoln Road, Peterborough PE1 3HA. Tel: 0733 68909. Fax: 0733 67299.

PROTEXT 5 IS HERE. This is the one that you have all been waiting for. Don't forget Protext v4.2 is still available as well as PRODATA.

Stand 3

Memory Expansion Systems

Britannia Buildings, 46 Fenwick Street, Liverpool L2 7NB. Tel: 051 236 0480. Fax: 051 227 2482.

Memory Expansion Systems will be selling and demonstrating their new range of Cortex memory products for the Amiga. High quality half meg, 2meg, 4, 6 and 8 meg Amiga upgrades will be on sale along with hard disk systems and external floppy drives. All at special show prices.

Ram chips for all types of machine will be available including 1m x 4bit static column drams for the A3000.

Stand 4

Rombo

6 Fairbairn Road, Kirkton North, Livingstone, Scotland EH54 6TS. Tel: 0506 414631. Fax: 0506 414634.

Rombo manufacture a low cost, high specification Video Frame Grabber (or Digitiser) for a range of various machines e.g. Commodore Amiga, Atari ST and IBM AT/XT compatibles.

Don't miss the chance to see for yourself the versatility and quality that is attainable from our low cost hi-specification digitiser.

Stand 8

HiSoft

The Old School, Greenfield, Bedford, MK45 5DE. Tel: 0525 718181. Fax: 0525 713716.

Stand 10

Interactive Publishing

Europa House, Adlington Park, Macclesfield, SK10 4NP. Tel: 0625 878888. Fax: 0625 879966.

Interactive Publishing is Europe's foremost publisher of Amiga specific magazines with AMIGA ACTION and AMIGA COMPUTING representing all tastes.

AMIGA ACTION will appeal to avid games players and fans of shoot-'em-ups with the most comprehensive round up of games reviews in any Amiga magazine in the UK.

Britain's longest established Amiga magazine, AMIGA COMPUTING appears in its sensational new look for the '90s, incorporating more pages of features, comment and news than ever before.

AMIGA COMPUTING is essential reading to ALL dedicated Amiga owners with coverag everything from programming to games, desktop publishing to music and communication graphics, plus a lively news round and letters page – in fact everything any Amiga enthusiast sho know.

Come to STAND 19 NOW! with your special show edition of AMIGA COMPUTING and buy great cover disk for just £1. Subscribe to either of our magazines TODAY and take away A FR MYSTERY GIFT.

Stand 12

Ocean Software

6 Central Street, Manchester M2 5NS. Tel: 061 832 6633. Fax: 061 834 0650.

The season's catalogue is stronger than ever reflecting the company's investment in software develop and design, reinforcing its dominant position as the principal publisher of computer games in Europe.

The new range of product covers both 8-bit and 16-bit architecture encompassing diver game types and paying tribute to a wide variety of creative sources.

CARTRIDGE SUPPORT - lending a new dimension to the Commodore 64 format, Cartridge br major advantages never before fully explored.

These advantages are: Instant access and loading. Loading from tape and disk is deemed t time consuming and wasteful in the eyes of the games player - valuable playing time is n maximised. Larger memory games. Up to two Meg (256K) can be stored on a cartridge allow more graphics, more levels and generally far more game. Presentation. Detailed and interesting between level screens and greater graphic animation.

All Ocean's new titles on Commodore cartridge are written specifically for the format the exploiting all of the above features.

STOP PRESS! For the first time ever, Ocean's full range of Christmas titles are all available on written specifically for the Commodore Amiga.

Stand 14

US Action

4 Whittlon Road, Twickenham, Middlesex TW1 1BJ. Tel: 081 891 6713. Fax: 0 892 8127

US Action/Amiga Direct No. 1 Amiga Specialists. Now in Britain US Action/Amiga Direct Europe's trailbl Amiga Club, more than 10,000 members.

Due to our international network (Holland, Belgium, Germany, U S A and England) you can now save hundreds of pounds on recommended retail prices. Your only commitment pay £10 for one year's membership.

When you join you can choose any one of the following free gifts: Wicked 50 games p Mouse pad, Marauder II ,the number one copy program in the U S A.

You will also receive four times a year a free colour catalogue. There will also be discount certain U K computer shows entrance fees and special offers at unbeatable prices, no obligatio buy. However at our unbeatable prices you can't resist.



Stand 16
Psygnosis
South Harrington Building, 182 Sefton Street, Liverpool L3 4BQ. Tel: 051 709 5755. Fax: 051 709 6466.

There will be AWESOME and OBITUS which are both T Shirt products, and CARTHAGE, and our secret weapon product for 1990 which is called Lemmings. We will also be previewing our CDTV technology.

Stand 19
Special Reserve & Official Secrets
Tel: 0279 600770. Fax: 0279 726842.

Special Reserve and Official Secrets are the largest computer games clubs in the UK, with a membership of over 35,000 16-bit games players.

The clubs are run by Inter-Mediates, the company headed by Tony Rainbird, founder of Rainbird Software.

Special Reserve supplies games to members at heavily discounted prices, a result of its bulk purchasing policy.

It also provides members with colourful Cyberpunk magazine called NRG with News, Reviews and Graphics of new games.

Official Secrets is tailored to the needs of adventure and role- players, supplying a wide range of specialist adventure software through Special Reserve.

Subscriptions include a 32 page magazine called Confidential and Myth, an adventure by Magnetic Scrolls, written exclusively for Official Secrets.

Tony Rainbird, John Tode, Debbie Magrane and Karen Hall will be on Stand 19, ready to persuade you to join.

Stand 21
Micro Anvika
53/54 Tottenham Court Road, London W1P 9RE. Tel: 071 636 2547

Welcome to the 1990 Xmas Commodore show. Micro Anvika are pleased to be taking part in this year's Xmas show again and as always in keeping with the tradition we have packed our stand with stockings full of goodies.

Whether you are looking for the latest in Amiga software or hardware we are at your service offering the best price on any goods at the show. We wish all our visitors a Merry Christmas and a Happy new Amiga Year.

Stand 26
CYB Computers
9 Crown Parade, Crown Lane Morden, Surrey SM4 5DA. Tel: 081 542 7662. Fax: 081 543 7527.

Surrey's premier Amiga dealer. Anything for the serious Amiga user is catered for. See us at the stand or visit our really large showrooms. Superb mailorder service.

If you have any questions or problems concerning Amiga hardware or software, come see us. Good prices on all products. "The competition knows us, you should too!"

Stand 28
Solid State Leisure
80 Finedon Road, Irthlingborough, Northants NN9 5TZ. Tel: 0933 650677. Fax: 0933 311790.

Solid State Leisure is THE rising star of the Amiga market, with and expert progject design team and state-of -the -art research and development equipement, coupled with large scale manufacturing facilities, it is set to take the Amiga market by storm.

Stand 31
Softstore
408-410 Bath Road, Slough SL1 6JA. Tel: 0628 668320. fax: 0628 668592.

Stand 33
Power Computing
44a Stanley Street, Bedford MK41 7RW. Tel: 0234 233000. Fax: 0236 270133.

From floppy drives, memory expansions, chips and software, to the latest in hi-tec hardware from America, you will find it all on the Power Computing stand.

Look out for the 50MHz 68030 accelerator card for the B2000, and the 600MB Optical Drive. Also on show will be the brand new A500 hard disk drive from GVP, the Amiga Framegrabber, and the new VideoMaster Digitiser-Genlock from Vidtech.

You can buy our Dual Amiga Floppy drive, the 512k Memory Expansion, and the 1.5Mb Memory expansion all at exciting show prices!

Stand 37
Greater London Computers
481 Hale End Road, Highams Park, London E4 9PT. Tel: 081 527 0405. Fax: 081 531 2688.

Stand 38
Electronic Arts
The Langley Business Centre, 11-49 Station Road, Langley, Berks SL3 8YN. Tel: 0753 49442. Fax: 0793 46672.

Electronic Arts is a leading producer of home entertainment computer software. With the success of titles like Polulous, 688 Attack Sub, Deluxe Paint III, and Interceptor, the company has been a dominant force in bringing interactive entertainment to the market.

Showing in their booth are a unique line of products ranging from fast racing action with Indianapolis 500, magical wizardry with The Immortal and ultimate conquest with their new hit PowerMonger.

PowerMonger is the next product from the designers of Populous, Bullfrog Productions. Electronic Arts welcome you to visit their booth, play their games and ask questions.

Stand 40
Domark
Ferry House, 55-57 Lacy Road, Putney, London SW15 1PR. Tel: 081 780 2222. Fax: 081 780 1540.

Amiga...C64 Games Systems...Commodore 64. Whatever the machine you own trust Domark to come up with the goods! We've got a fabulous selection of software from arcade games to flight simulations.

On the Amiga fly the ultimate in fighter jets - the MiG-29 Fulcrum or test drive the amazing Hard Drivin'll - sequel to its No 1 Best Selling predecessor.

If speed's your aim then S.T.U.N. Runner's your game and don't forget Spy and Badlands.

New for the C64 GS are the amazing Tengen coin-op conversions of Vindicators, Cyberball, which gives a new meaning to American football, Klax, the addictively simple brainteaser and Badlands, sequel to the superb Super Sprint.

Take Bond on at his own game in The Spy Who Loved Me and beat the best in the dirtiest race in town - Badlands. Both for the Commodore 64.

Stand 42
Silica Shop
Unit 10 Ruxley Corner Industrial Estate, Edginton Way, Sidcup Bypass, Sidcup, Kent DA14 5SS. Tel: 081 309 1111. Fax: 081 308 1230.

Silica Shop are the UKs No 1 Commodore Amiga specialist retailer and hold the largest range of Amiga products in the country.

They will have a wide selection of these products at the show, covering both hardware and software. Silica have been dedicated to the Amiga range ever since its release into the UK market and are now the undisputed leaders in the Amiga field.

Apart from their London and Sidcup branches, Silica run a speedy mail order operation and provide Amiga owners with a specialist service that is second to none, including FREE newsletters and technical support helpline.

To receive Silica's FREE brochures, contact Silica by telephone or write to Silica Shop, 1-4 The Mews, Hatherley Road, Sidcup, Kent DA14 4DX, or you may register today at the Commodore User Show by completing a card on the Silica Shop stand.

Both Silica branches and mail order department will be extending their opening hours during the Christmas period. For further details call Silica on 081 309 1111.

Stand 46a
Mindscape
P O Box 1019, Lewes East Sussex BN8 4DW. Tel: 044 486 545/547. Fax: 044 486 688.

Mindscape will be showing all of it's powerful Christmas line-up on Commodore Amiga, Commodore PC and Commodore GS.

Visitors to the show will get a chance to play the brand new game from Gray Matter called The Ultimate Ride - this is motorbike racing simulation at its very best with some amazing graphics from the paint box of the creators of Fiendish Freddy - making The Ultimate Ride a real interactive racing movie.

Ever fancied a chance of becoming a hospital surgeon?

Life and Death for the Amiga puts the scalpel and the life of your patient firmly in your hands.

Mindscape will also be showing its autumn hit, Captive. Fans of the game will have the chance to meet programmer Tony Crowther and glean some hot playing tips or maybe even the real news about Captive II - Freedom Fighters.

Mindscape will premier the exciting range of simulation product by the world famous Three-Sixty team from California.

The first games are Blue Max - the world war one dog-fight simulator and Das Boot a stunning U-boat simulation with a multiple mission scenario. Both will be on the Amiga before Christmas.

For those who can't handle the pace from the rest of our Christmas games, there is at last the chance to play the world's best selling chess game on the Amiga - Chessmaster 2100.

There is no doubt that whatever your taste in games is, it cannot fail to be satisfied by a visit to the Mindscape Grotto.

Stand 46b
Chettah
Norbury House, Norbury Road, Fairwater, Cardiff CF5 3AS. Tel: 0222 555525. Fax: 0222 555527.

Cheetah, the UKs leading manufacturer of computer joysticks, peripherals and musical instruments, will be proudly showing their new and existing ranges.

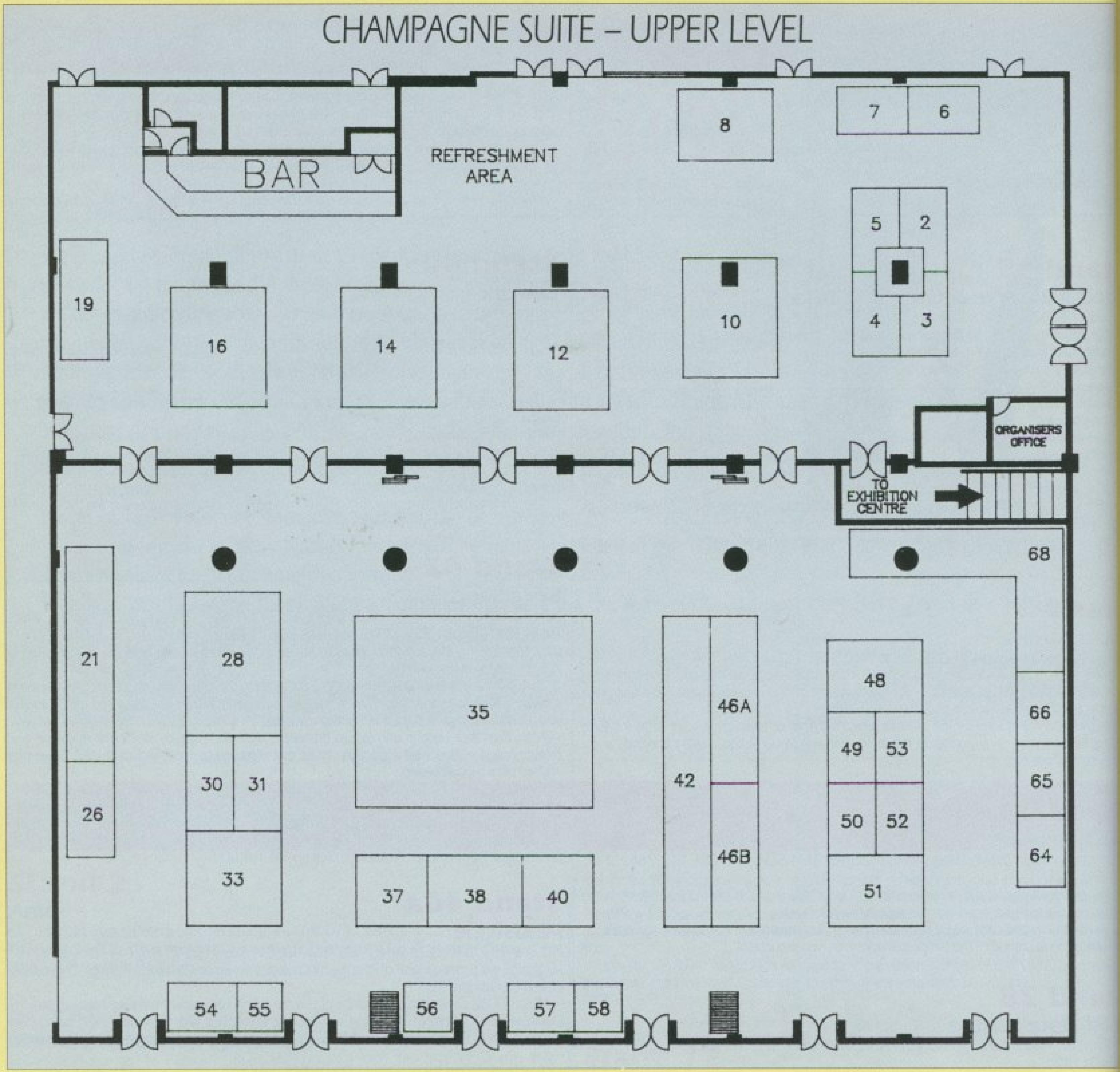
The company will be giving away free T shirts with the purchase of selected items as well as offering very special deals on other products.

Speech synthesisers, infra red joysticks and interfaces will be amongst these special offers, so a visit to Cheetah near the Commodore stand should not go amiss.

Of course the company also manufacture games cartridges for the world's leading software houses, and personnel will be on hand to answer any inquiries.

Stand 48
Marcam
62 Tenter Road, Moulton Park Business Centre, Northampton NN3 1AX. Tel: 0604 790466. Fax: 0604 647403.

Marcam have for the past four years been producing the high quality range of Rendale Genlocks,

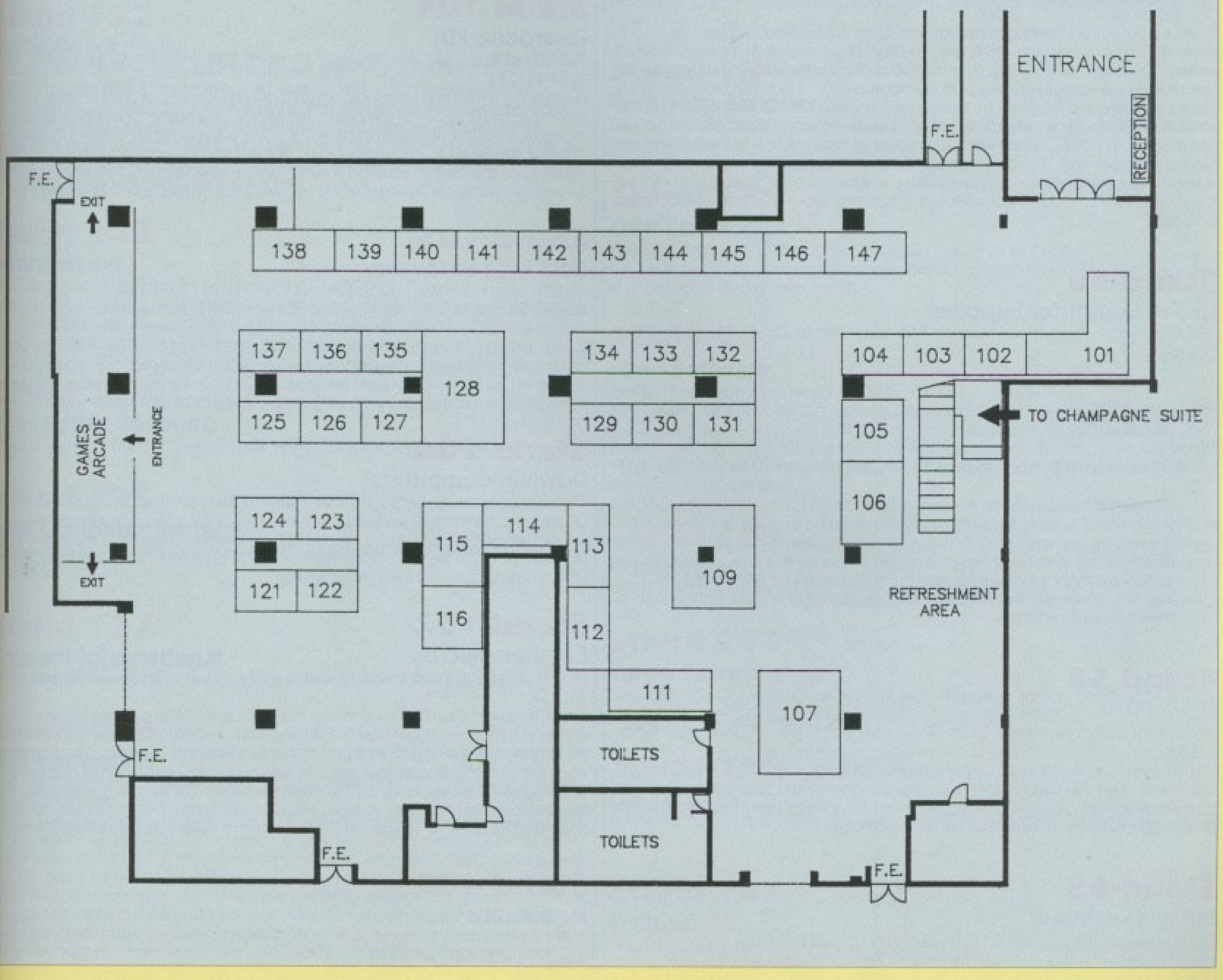


Exhibitors Index

A15000 Ltd....49
Alf Payne....131
Arnor....2
Athene Computers....114
Best Byte....105
Bits 'N' Bytes....112
Cate Electronics....135
Cheetah....46b
Commodore....35
Compliment....138
Computer Vision....104
Connect International....127
CYB....26
Database Interactive....10
Digital Discs....121
Domark....40
Dowling Computers....106
Eclipse....147
Electronic Arts....38
Elite Systems....51
European Peripherals....134
Evesham Micros....107
FMG....57
Greater London Computers....37
Harpers....111
Hi-Tech Computer Supplie....s56
HiSoft8 ICPUG....54
Marcam....48
Media Direct....122
Mediaware....109
Memory Expansion Systems....3
Micro Anvika....21
Microsmart....102
Miles Better Software....124
Mindscape....46a
Mirrorsoft....68
Mutant Software....103
Nadisystems....123
Nova PD....58
Ocean Software....12
Power Computing....33
Premier Mail Order....130
Psygnosis....16
Public Dominator....65
Rombo....4
Senlec Software PD....132
Silica Shop....42
Siren Software....137
Softsellers....101
Softstore....31
Software Selection....113
Solid State Leisure....28
Special Reserve & Official Secrets....19
Start Computer Systems....125
Track Computer Systems....133
Turbo Software....143
U S Action....14
WTS Electronics....129

Who's who at the Show – and where to find them

EXHIBITION CENTRE – LOWER LEVEL



the 8802 and the 8806.

At this show we are launching the latest Rendale Genlock, a Super-VHS version of the economy priced 8802, this version as well as having the usual features of the 8802 also has fade and wipe options fitted as standard, also mode control selection is provided by hardware.

Nowadays, as well as producing Rendale products, the company is also marketing quality third party products, such as the Framegrabber and 3D Professional, professional quality products from the States.

Stand 49

A1500

3rd Floor, 21 Great Portland Street, London W1N 5DB. Tel: 071 637 2281. Fax: 071 637 4002.

A1500 has been formed as the trading company for the A1500 expansion system for the Amiga 500 by its inventor Michael Roots.

Following two years of research and design, the product has been successfully prototyped over the last few months and is now in full production. The A1500 expansion system is being officially launched at this exhibition.

The system's capabilities include: Detachable keyboard, up to three disk drives (two floppy drives mounted at front), mouse and joystick ports at front, internal Amiga 500 and Amiga 2000 busses, Amiga 2000 video port, additional microprocessor socket, 19in rack mounting system.

Stand 51

Elite Systems

Anchor House, Anchor Road, Aldridge, Walsall, West Midlands WS9 8PW. Tel: 0922 55852. Fax: 0922 743029.

Elite exhibits at the Commodore Xmas Show for the first time ever, showing some of the new C64 and Amiga products scheduled for release during Autumn/Winter 1990. On the stand we shall be exhibiting Gremlins 2 - Amiga, Tournament Golf - Amiga, World Championship Soccer - Amiga and C64. Also, an, as yet unannounced title scheduled for release January 1990. We hope this show will be a very good launch pad into this new phase of licensed products under development.

Stand 54

ICPUG

45 Brookscroft, Linton Glade, Croydon, Surrey CR0 9NA. Tel: 081 651 5436. Fax: 081 651 3428.

ICPUG, the Independent Commodore Products Users Group, is the premier computer user group in Britain and is in its twelfth year. Unlike many so-called user groups, which are only commercial marketing operations, ICPUG is a genuine association of computer users working together for mutual benefit and organized as a non- profit making co-operative. It is co-ordinated by a voluntary national committee, and there are many separate regional groups. Benefits of membership include access to the FREE public domain software library, technical assistance and discounts on hardware and software. The ICPUG Journal, which is produced six times a year, is in the region of one hundred pages per issue. It is widely regarded as the most authoritative journal on Commodore machines in the world, providing extensive coverage of the full range of computers including the Amiga, C64, PC, PET and all other models. For additional information please contact Janet Bickerstaff.

Stand 56

Hi-Tec Computer Supplies

131 Wellington Street, Peterborough PE1 5DU. Tel: 0733 555945. Fax: 0733 558974.

Stand 57

FMG

Hazlitt Mews, Hazlitt Road, London W14 0JZ. tel: 071 603 3313. Fax: 071 602 2627.

FMG are suppliers of repairs and on-site maintenance for all Commodore computers - from C64s and A500s to PCs. As well as repairs, the company also offers extended warranties on C64s and A500s to guard against any mechanical failure for two years. Just one payment gives you peace of mind and confidence in your computer for the period covered - if anything goes wrong, you simply send it back to FMG and they'll repair it for not extra charge. As a special offer for the show FMG are giving away free software with every extended warranty taken out. For details just pop along to Stand 57 in the Champagne Suite.

Stand 58

Nova PD

30 Parsons Street, Banbury, Oxon OX16 8LY. Tel: 0295 262029. Fax: 0295 275044.

Nova PD provide a complete Public Domain service for the Amiga, everything from utilities to the latest demos. Over 800 disks in stock plus a free ordering service and same day despatch make Nova one of the most popular PD companies around. Nova have recently released a low cost Database system and this will be available from their stand for just £9.99.

Stand 65

Public Dominator

P O Box 801, Bishops Stortford, Herts CM233TP. Tel: 0279 757692.

Suppliers of Public Domain and Shareware software for the Commodore Amiga.

Stand 68

Mirrorsoft

Irwin House, 118 Southwark Street, London SE1. Tel: 071 928 1454. Fax: 071 58[illegible] 3494.

Mirrorsoft is Europes leading 16 bit Entertainment Software Publisher. In addition to publishi[ng] Entertainment software under its two house labels Imageworks and PSS, Mirrorsoft also publishes [on] behalf of three of America's most exciting software houses: Cinemaware, PSS and Spectru[m] Holobyte. All labels represented by Mirrorsoft have a strong brand identity and market niche. [illegible] can offer European game players both at home and abroad a range of first class product catering [in] every major market area. 1989 was Mirrorsofts best year ever in terms of critical acclaim a[nd] commercial success. We believe our line-up for 1990 is even stronger.

Stand 101

Softsellers

6 Bond Street, Ipswich, Suffolk IP4 1JE. Tel: 0473 216160. Fax: 0473 213457.

Stand 102

Microsmart

125 Strong High Street, Milton Keynes MK11 1AT. Tel: 0908 564369.

Microsmart a name that is associated with the more experienced companies of the indus[try] renowned for it's 16-bit peripherals and utilities knowledge and stockholding, and still being v[ery] much in touch with the 16-bit games software market; involving titles old and new. We have got t[he] right product at the right price. So whether your need is through our wholesale or mailorder, plea[se] call a sales team that is down to earth, informative and not full of time wasting sales speil.

Stand 103

Mutant Software

475 Staines Road, Bedfont, Middlesex TW14 6BL. Tel: 081 751 5999. Fax: 081 75[illegible] 5760.

Computer software games. Specialists, Amiga Atari and PC games held at Mutant headquarters. [illegible] immediate sale to the crazy games buying public - cum chek dis vt at stail nomber witefer.

Stand 104

Riverdene PDL

30a School Road, Tilehurst, Reading, Berkshire RG3 5AN. Tel: 0734 452416. Fa[x:] 0734 451239.

Riverdene PDL is more than just a public domain library with customers all over the world. We ha[ve] grown to be one of the best by offering that 'little bit extra'. Our hotline, for example is on hand [for] the serious Amiga user when difficulties arise. Also a laser outputting service is offered together w[ith] electronic transfer on to 35mm colour slides of your favourite computer graphics. Compu[ter] hardware and software with associated ancillary items are available at very competitive prices fr[om] our new shop premises in Reading. Come to our stand and see for yourself our Mad Hatter prices.

Stand 105

Best Byte Software

48 Nevill Avenue, Hove, East Sussex BN3 7NA. Tel: 0273 746467.

Originally founded in 1986, Best Byte has built a reputation in the mail order market as one [of] service excellence with unbeatable prices. The very latest Amiga games will be available over t[he] counter at discount show prices. Large stocks of blank disks will be on supply which have prov[ed] very popular with customers. Peripherals from mouse mats to memory upgrades, from dust cov[ers] to disk drives will be on sale. Hot out of user groups hands will be the very best in music and graph[ics] demos playing on our stand (many previously unreleased) and for sale at a minimal charge.

Stand 106

Dowling Computers

48 Tyne Road, Sandy, Beds SG19 1SA. Tel: 0767 681760. Fax: 0767 681730.

On sale will be many popular products for your Amiga - prices will, as usual, be very competitive a[nd] our staff will be pleased to discuss your particular requirements. As well as the newer Ami[ga] products we will have the new range of Star 9 pin and 24 pin printers - mono and colour. May [we] wish you a happy show and a very merry Christmas.

Stand 107

Evesham Micros

Unit 9, St Richards Road, Evesham, Worcs WR11 6XJ. Tel: 0386 765500. Fax: 038[6] 765354.

One of the longest established companies in their field, Evesham Micros offers extensive hardwa[re] options, with a solid reputation for good service and prices. Awarded "Atari Dealer of the year 19[illegible] the company feels it is a significant tribute to their commitment to the Atari range of comput[ers] which extends over three years. Their mail order service utilises the latest in computerised mail ord[er] technology, whilst also operating retail showrooms in Evesham, Cambridge and Birmingham. Th[ey] have their own comprehensively equipped workshop, where trained technicians are available [for] help and advice. Customer Services and Technical Department offer complete after-sales assistance.

Stand 109

Mediaware

unit 19 Teddington Business park, Station Road, Middlesex TW11 9BQ. Tel: 08[1] 977 8777. Fax: 081 977 9444.

Stand 111
Harpers Computers
71 Commercial Way, Woking, Surrey GU21 1HN. Tel: 0483 756601. fax: 0483 769433.
Harpers Computers have been involved in supplying computers for nearly 10 years and can offer almost all you require. We will be selling the latest range of Commodore computers along with many peripherals including Star and Citizen printers. We hope you enjoy the show and please do visit our stand or your won't know what you missed!

Stand 112
Bits 'N' Bytes
8-12 Dial Lane, Ipswich, Suffolk.
Bits'N' Bytes computer centres are one of East Anglia's leading computer retailers covering all aspects of the computer industry from games machines to the 386 desktop PC. On sale at this venue will be 16 bit software including new releases as well as back catalogue titles at massively reduced prices. These will be one off offers for the 16 bit fair. Computers, printers, monitors, and peripherals will also be available at massive discounts. It will be possible to order hardware and software at this venue and have it mailed to you the following week.

Stand 113
Software Selection
P O Box 786, Sutton Coldfield, West Midlands BT4 4MG. Tel: 021 352 0847.
Software Selection - Games for Commodore Amiga, C64 - C16 at bargain prices.

Stand 114
Athene Computers
16 Stoke Road, Gosport, Hants PO12 1JB. Tel: 0705 511439. Fax: 0705 511646.

Stand 121
Digital Discs
60 Burnside Drive, Bramcote Hills, Beeston, Notts, NG9 3EE. Tel: 0602 256197.

Stand 122
Media Direct
11 Sage Close, Hanley, Stoke on Trent ST1 3SF. Tel: 0782 208228.
Media Direct started off as a small family business operating from one of the partners homes. As our reputation, as a company that supplies quality product and excellent service, we have grown to be amongst one of the leading mail order suppliers of computer accessories and consumables.
During the time we have been trading our product range has significantly increased to meet the needs of our customers. We pride ourselves in supplying a quality service and like to think that we are a company who'm always puts the customer first.

Stand 123
Nadisystems
143 Fairfoot Road, London E3 4EJ. Tel: 071 537 4702.
At NADISYSTEMS we specialise in computer supplies i.e. diskettes, listing papers, labels, storage boxes, ribbons etc. We also sell computer systems like Amiga Atari, Amstrad, Olivetti, Opus and a wide range of printers and other peripherals. More details on the stand.

Stand 124
Miles Better Software
219-221 Cannock Road, Cannock, Staffs WS11 2DD. Tel: 0543 466580.

Stand 125
Start Computer Systems
Barbican House, Bonnersfield, Sunderland SR6 0A. Tel: 091 564 1400. Fax: 091 564 1005.

Stand 127
Connect International
6 Talls Lane, Fenstanton Huntingdon, Cambridge, PE18 9JJ. Tel: 0844 47831.

Stand 129
WTS Electronics
Studio Master House, Chaul End Lane, Luton, Beds LU4 8EZ. Tel: 0582 491949. Fax: 0582 505900.
WTS Specialist in memories and maintenance will be selling their much renowned A500 1/2 Meg memory Upgrade with the 'Chip Memory' option, coupled with the long awaited A500 High Quality External Drive. Products will be available singularly or as super value discounted Christmas Bumper Pack. All products will be sold at unbelievable show prices. In addition, other exciting products will also be available on our stand, along with repair and technical advice from our second to none computer engineering staff who will be at your disposal to help with any technical problems you may have, or faulty machines in need of attention. All in all, if you want to leave the show with a smiling face, healthy computer and wealthy wallet, be sure to visit WTS on stand number 129.

Stand 130
Premier Mail Order
6 Buckwins Square, Burnt Mills, Basildon, Essex SS13 1BJ. Tel: 0268 590766. Fax: 0268 590076.
Premier Mail Order is one of the oldest established Software mail order companies and has been providing a fast reliable service to many thousands of satisfied customers. We will be displaying a wide range of Amiga software and peripherals at very competitive prices along with some amazing bargains for those CBM 64 owners amongst you, on our stand. Hopefully, delays permitting we should have some of the major christmas releases available including; POWERMONGER, ROBOCOP2, TOTAL RECALL, GOLDEN AXE, OFF ROAD RACING and maybe even those elusive TURTLES. Please come and visit our stand and be greeted with a good buy.

Stand 131
Alf Payne
23 Victoria Road, Dagenham, Essex RM10 7XL. Tel: 081 595 4904/5153.
For Christmas bargains great and small, Come to us we've got them all. "Well probably". Amiga games, budget and full price, joystick, disc drives, half Meg upgrades etc.

Stand 132
Senlac Software
14 Oaklea Close, Old Roar Road, St Leonards on Sea, East Sussex TN37 7HB. Tel: 0424 753070. Fax: 0424 755093.
Senlac for all your Public Domain software. We carry a comprehensive range of PD and Shareware programs, concentrating now solely for the Amiga. Come to our stand and see the latest animation from Doctor Gandale 'upgrade' 5 megs worth of Turbosilver animation.

Stand 133
Track Computer Systems
Blacksmiths Yard, Sadler Gate, Derby DE1 3PD. Tel: 0332 41817. Fax: 0332 44001.
Visit Stand 133 for the future of software retailing. Track will have over 500 games titles on compact disk ready to download for your Commodore 64 or Amiga. There will also be amazing superbase deals. Don't forget the highly acclaimed track public domai software sets at an incredible £4.95 for 5 disks. Also available many items of serious software at serious discounts. Check our advert in Amiga Computing. Spot prizes may be awarded for anybody spotting any Track team member not on the stand. Check Dis Out.

Stand 134
European Peripherals
36 Cranford Gardens, Compton Acres West Bridgeford, Nottingham NG2 7SE. Tel: 0602 841640.

Stand 135
Care Electronics
800 St Albans Road, Garston, Herts WD2 6N. Tel: 0923 672102.
Care Electronics will be launching their amazing Flexi-Dump, Screen-Dump utility. Compatible with all art packages (including Spectrum 512).

Stand 137
Siren Software
84-86 Prices Street, Manchester M1 6NG. Tel: 061 228 1831.
Siren Software will be showing the remarkable Soundblaster, a stereo amplifier that comes complete with speakers, power supply and a FREE set of stereo headphones. We will also be selling and demonstrating X-Copy Professional, the ultimate disc back-up system. Besides copying floppy discs, X-Copy Professional also has hard disc backup and a superb file copier. Will also be supplying disc drives, discs and PD software.

Stand 138
Complement
52/53 Margaret Street, London, W1N 7FF. Tel:071 436 3436.

Stand 143
Turbo Software
Unit 6/7 Acacia Close, Cherry Court Way Industrial estate, Stenbridge Road, Leighton Buzard LU7 8QE. Tel: 0525 852277. Fax: 0525 852278.

Stand 146
D K Discs
8 Chelsea Road, Lower Weston, Bath HA1 3DU. Tel: 0225 310463. fax: 0225 446827.

Stand 147
Eclilpse

Seminar Timetable

FRIDAY

11.15am-12.15pm ....COMMODORE
2pm-3pm ....PSYGNOSIS
3.30pm-4.30pm ....AMOS/FUN SCHOOL 3

SATURDAY

10.15am-11am ....AMOS/FUN SCHOOL 3
11.15am-12.15pm ....COMMODORE
2pm-3pm ....ICPUG

SUNDAY

10.30am-11.30am ....AMOS/FUN SCHOOL 3
12 noon-1pm.............................ELECTRONICS ARTS
1.30pm-2.30pm...ICPUG

The provisional Seminar timetable was correct at the time of going to press. But a number of other presentations are being arranged to take place during the three days of the Show.

PSYGNOSIS
Psygnosis presents the future of games entertainment – the next generation.

COMMODORE
David Chamberlain, of Soft Stuff Software, will be presenting hissuccessful range of "Let's Spell" software packages, one of which is featured in Commodore's new "Class of the 90's – First Steps" pack. SoftStuff Software continues to develop education software in conjunction with fully qualified primary school teaching staff, with the aim of making learning fun for young children.

ICPUG
At the Independent Commodore Products Users Group's question and answer seminars you will be able to fire your questions at a team of experts. A team will be drawn each day from the following: Tim Arnor (Precision Software), John Bickerstaff (chairman ICPUG), Harry Broomhall (programmer), Jack Cohen (8 bit specialist), John Collins (programmer), Brian Grainger (languages expert), Joe Griffin (vice chairman ICPUG), Nigel Haydon (technical advisor), Will Light (computer lecturer), Peter Miles (Amiga librarian), Dave Parkinson (Ariadne Interactive), Peter Richardson (regional organiser - north), Kelly Sumner (Commodore sales director), Mark Tilley (Arnor), Barry Thurston (Commodore developer support), Gary Van Hoel (p rogrammer), Chris Wright (Bytes and Pieces).

AMOS/FUN SCHOOL 3
Unleash your imagination with AMOS and experience its speed and power as the Mandarin technical staff put AMOS through its paces. This market leading package has sold more than 25,000 copies to date and you'll discover how easy it is to create your own exciting software.

AMOS 3D will also be on show: Colourful 3D objects can be animated in real-time to music - and all in AMOS Basic!

For those of you with children, Database Educational Software will be demonstrating its range of Fun School 3 packages – for under 5s, 5 to 7 and Over 7s - the follow-up to the 160,000 best selling Fun School 2. The talk will show how easy learning can be with this fun and addictive software.

ELECTRONIC ARTS
Electronic Arts will be presenting some of their newest titles for the Christmas season. Featuring will be their new release, Powermonge. This is from the designers of the mega-hit Populous.

Come by and see why this masterpiece program has been getting the highest reviews in almost all the computer magazines. As Zero magazine put it, "It's ruddy brilliant."

We do it in real-time ...and in COLOUR.



All our video digitisers are real-time colour and capture a picture as fast as a TV camera can provide it, PLUS – All include a live framestore output for connecting to a second picture monitor or even a TV set to simplify focusing and setup. (Your computer monitor may have a switched CVBS input so you may not need a separate framestore display.) PLUS – All have monochrome facilities with comprehensive software tools.

SuperPic Amiga – Real-time digitising with genlock. Software to take advantage of the Amiga's colourful 4096 colour HAM display; including overscan and interlace as well as 32 colour mode. Writes IFF compatible and custom format picture files. Works with A2000, A500 (A1000 with adaptor).
Recommended retail price **£520.87** (£599 inc. VAT).

SuperPic PC – Includes IBM interface card and UHF TV framestore output. The framestore system means that even non-VGA PC users can save and recall colour images. Software to produce 256 colour VGA images from a palette of 256,000 and write GIF, PCX and custom format files.
Recommended retail price **£520.87** (£599 inc. VAT).

ColourPic Amiga – Similar specification to SuperPic Amiga, without genlock but includes UHF TV output.
Recommended retail price **£433.92** (£499 inc. VAT).

SuperPic, SuperPic PC and **ColourPic** can be obtained from your Amiga/PC dealer or for UK orders only send your cheque (including VAT) made out to JCL Business Systems and your digitiser will be shipped FOC by courier within two days (subject to availability). State model required. For orders outside UK please phone or FAX for details.

JCL

BUSINESS SYSTEMS LIMITED
71 St. John's Road, Tunbridge Well, Kent TN4 9TT. Tel: Tunbridge Wells (0892) 510845. Fax: (0892) 511772

Diamond Computers

*** Call your local branch now! ***

Southampton (0703) 232777 *Poole* (0202) 716226 *Midlands* (0926) 312155
London 081-597 8851 *Bristol* (0272) 693545 *Southern Ireland* 061-376744
Manchester 061-257 3999 *Export Hotline:* 0272 693545



Diamond's Screen Gems!

AMIGA 500 computer with all the following!

Shadow Of The Beast II, Days Of Thunder, Back To The Future II, Night Breed, Deluxe Paint II, Datastorm, Dungeon Quest, E-Motion, Grand Monster Slam, Kid Gloves, Chessplayer, RVF Honda, Shufflepuck Cafe, Microprose Soccer, Rick Dangerous + 100 PD Programs & a Joystick!

Special bonus: Two mystery games!

All for **£399** including VAT

Diamond's Flight Of Fantasy!

AMIGA 500 computer with all the following!

F29 Retaliator, Rainbow Islands, Escape From The Planet Of The Robot Monsters, Deluxe Paint II, Datastorm, Dungeon Quest, E-Motion, Grand Monster Slam, Kid Gloves, Chessplayer, RVF Honda, Shufflepuck Cafe, Microprose Soccer, Rick Dangerous + 100 PD Programs & a Joystick!

Special bonus: Two mystery games!

All for **£399** including VAT





Diamond's Flight Of Fantasy 2!

AMIGA 500 computer with all the following!

F29 Retaliator, Rainbow Islands, Escape From The Planet Of The Robot Monsters, Deluxe Paint II, Blood Money, Menace, Ballistix, Total Eclipse, Dark Side, Clown-o-mania, Table Tennis, Saint & Greavsie, BAAL, Paperboy, Netherworld + 100 PD Programs & a Joystick!

All for **£399** including VAT

Commodore A590

20Mb Hard disk with 2Mb memory on board for the *AMIGA* 500

* New give away price **£299!** *

S

12155
76744

ns!
the

Back To
nt II,
d Monster
onda,
r,
oystick!

VAT



nsy 2!
the

nsters,
llistix,
Table
boy,
stick!

VAT

price
9!
*



Diamond's Vision Pack

If you thought the Diamond Screen Gem Pack was good value for money then look:

Diamond's Screen Gem Pack
PLUS
New Philips 8833 Mk II Colour Stereo Monitor
PLUS *Cables*

All for **£575** including VAT

AMIGA 500 + Philips Monitor £559

Diamond Word Processing Pack

The most complete Amiga pack:
Amiga 500, PSO, Mouse, Colour Stereo Monitor, Cables and High Quality Dot Matrix Printer. Inc. Word Processing software

All for **£659** including VAT

Add an extra disk drive and half meg to your Amiga for just £79 inc. VAT

First Steps *AMIGA* 500 Education Pack

Includes:
Deluxe Paint II, Deluxe Print II, Pro Write 2.5, Infofile, Music Mouse, Let's Spell at Home, Amiga Logo with Talking Turtle, BBC Emulator, TV Modulator + Introductory video.
0.5 Meg Upgrade!

£P.O.A.
Please call.

Only while stocks last!!

Stop Press!!!

AMIGA 500 computers from only £259

Special Buy!

Ring your nearest branch to order yours before it's too late!

Okimate 20

High Quality 24-pin colour printer

£149.95

including VAT, delivery, start-up disk, two ribbons & paper!
Order NOW! Next shipment due shortly

AMIGA external drive

with thru-port & on-off switch!

£49.95
including VAT

Diamond are a Premier Commodore Dealer



The *AMIGA* 3000

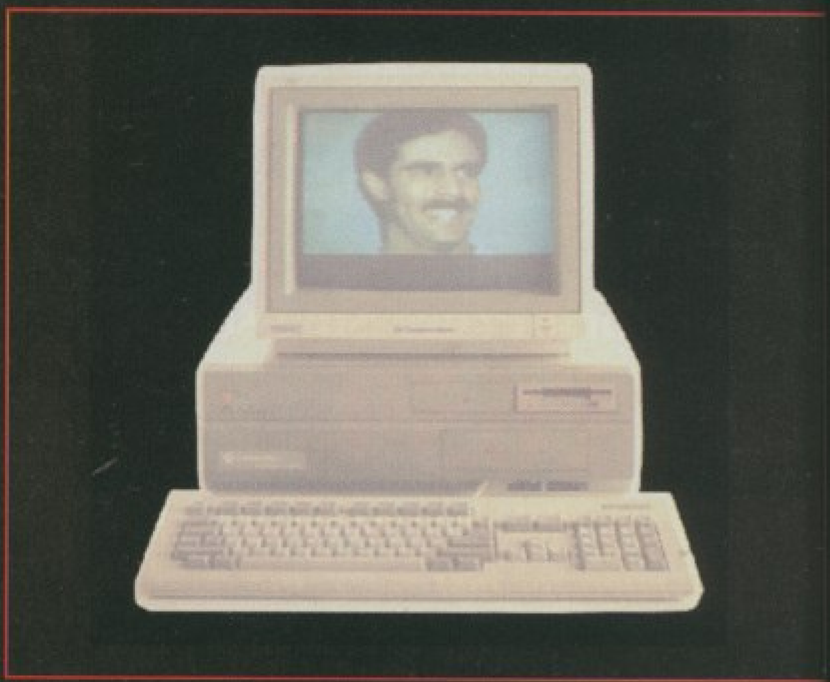
AMIGA 3000 - 25 - 40
25Mhz clock speed with 40Mb hard disk
£P.O.A.

AMIGA 3000 - 25 - 100
25Mhz clock speed with 100Mb hard disk
£P.O.A.

Part exchange your *AMIGA* 2000 for an *AMIGA* 3000 - 25 - 100 and pay as little as £1899

The *AMIGA* 2000

Call for prices of your 2000 system.
Part exchange your existing *AMIGA* 500 system and get an *AMIGA* 2000 from
£499 including VAT
Full range of peripherals stocked – call for prices & advise.



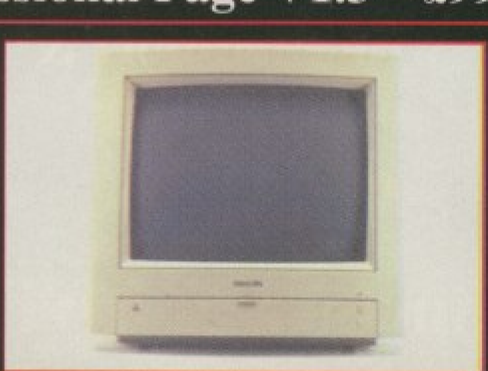
Call our expert sales team on your local number!

Amiga Storage Devices
40Mb HD – £295
40Mb HD + 2 Meg Ram – £339
100Mb HD – £699
200 Mb HD – £ Too low to print
THE ULTIMATE
44 Mb Removable hard disk, unlimited storage capacity, each cartridge only £99
Controller, Syquest & cartridge only £999 inc VAT
CD ROM PLAYERS NOW AVAILABLE

Amiga 2000 – 8 up Board – 2 Meg Pop
ONLY £250 inc VAT
VIDEOS FROM DIAMOND
Pod Scat Graphics Tablet – £Too low to print
Rendalf 8802 Genlock – £189 inc
New SVHS Rendale Genlock – £399
Rendale 8806 Genlock – £499
G2 Genlock – £595
Vidi Amiga inc Colour Kit – £99
Digiview Gold V4 – £95
Colour Pic – £499 inc
Markham Frame Grabber – £499
Panasonic Ave5 Video Mixing Desk – £799 inc

Professional Amiga Software

Just a sample of our Prices, Call for the Title of your Choice
Professional Page V1.3 – £99 Audio Engineer – £179 inc Sculpt 4D – £309



The New Philips 8833 II

£199

with on-site maintenance

New Low Price!

AMIGA 500 half meg upgrade

£29.95 including VAT

or £39.95 inc VAT with Comicsetter, Spritz Paint or Fantavision

AMIGA 500 8Mb ram board with 2Mb populated

Exclusive to Diamond

Easy to install – fits under your computer in the trap door!

£149.95 including VAT

OR – POPULATE IT TO YOUR OWN REQUIREMENTS

A500 8Mb Board O.K. Pop. – £99 inc.
8Mb Board 2Mb Pop. – £149.95 inc.
8Mb Board 4Mb Pop – £249.95 inc.
8Mb Board 6Mb Pop – £349.95 inc.
8Mb Board 8 Mb Pop £449.95 inc. VAT

Deduct £30 if you part exchange your old 512K Ram Board

Fed up of Unplugging your Printer?

2 Way Switch Box inc. Lead – ONLY £34.95 inc.
4 Way Switch Box inc. Lead – ONLY £49.95

AMIGA external drive

£49.95 including VAT with through port & on/off switch

Printers

Citizen Swift 24	£234
Philips NMS1432	£99
Canon Bubblejet	£438
Star LC10	£118
Star LC10 colour	£154
Star LC200 colour	NEW £169
Star LC24/10	£188
Star LC24-200	NEW £219
Star XB24/10 colour	£364
Panasonic KXP1124	£194
HP Deskjet 500	£379
HP Paintjet	£699
Citizen 120D	£102
Epson LX-400	£121
Epson LX-850	£168
Epson LQ-550	£249
Okimate 20	£130

STOP PRESS – NEW JUST IN

OKI 880 24 pin Sheet Feeder	£295
OKI Laser	Too Low to Print

Monitors

Philips 8833 (UK) colour stereo monitor – £199

NEW
Philips 8833 Mk II – ONLY £199

Commodore 1084S colour stereo monitor – £189

New Commodore 1084SD – £209

Diamond Multisync 2 – £295

Diamond Multisync 3D Super VGA 1024 x 768 – £379

NEC colour monitor (for BBC B & Master, C64, Amstrad PPC, IBM PC)

TUNER FOR ANY MONITOR WITH CUBS INPUT

ONLY **£49.99**

HOW TO ORDER:

Phone through with your Access or Visa card, or send a cheque or P.O. to your local branch.
Diamond Computer Systems Ltd., 84 Lodge Road, Southampton, SO2 2QS.
Diamond Computer Systems Ltd., 406 Ashley Road, Upper Parkstone, Poole, Dorset, BH14 0AA.
LHC Microsales, 121 Regents St., Leamington Spa, Warwickshire.
LAN Computer Systems Ltd., 1045 High Road, Chadwell Heath, Romford, Essex.
Diamond Computer Systems Ltd., 227 Filton Avenue, Horfield, Bristol.
Diamond Computer Systems Ltd., 1022 Stockport Road, Levenshulme, Manchester
Diamond Computer Systems Ltd., Ballina, Killaloe, Co. Clare, Eire.

Southampton (0703) 232777
Poole (0202) 716226
Midlands (0926) 312155
London 081-597 8851
Bristol (0272) 693545
Eire 061-376740
Manchester 061-257 3999

All prices exclude VAT unless otherwise stated. Courier delivery £7.50. Next day service £10. E&OE. All prices correct at time of going to press and subject to change without notice.

Public Domain

The ever pure, ever vigilant, ever frugal, ever Scottish Stewart C Russell takes his monthly gander at what astounding software can be had for nowt.

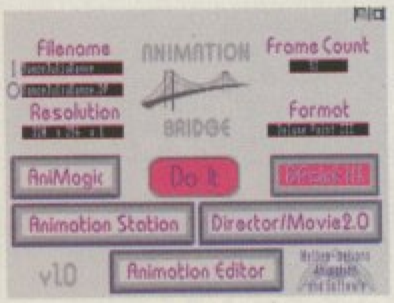
ABridge

DON'T you just love Standards? Every other industry has standards, but only the computer industry has Standards.

Let me explain. A standard part will fit where it's meant to fit, and work as it's meant to work. Software, however, may say that it will accept a certain Standard file format, but the truth is, the Standard format is open to different interpretations, creating vast incompatibilities which, in theory at least, should not exist.

As one animation package seldom gives the desired results, it's often necessary to use several of them, swapping files between them. If you want to use two packages that speak slightly different dialects of ANIM, you have what is technically known as a Problem.

To every Problem, there's a Solution – and that's not a solution of alcohol in water. No, the solution is Animation Bridge (Fish disk 359), which will interchange files between most animation packages. Oh, alright, between The Director, Sculpt-Animate 4D, Photon Paint 2, Animagic, Videoscape, Animation Station, DPaint III, Animation: Editor 1.11 and Cel Animator. Enough to be going on with, anyway. Even if you only use DPaint III, Animation Bridge has something to offer.

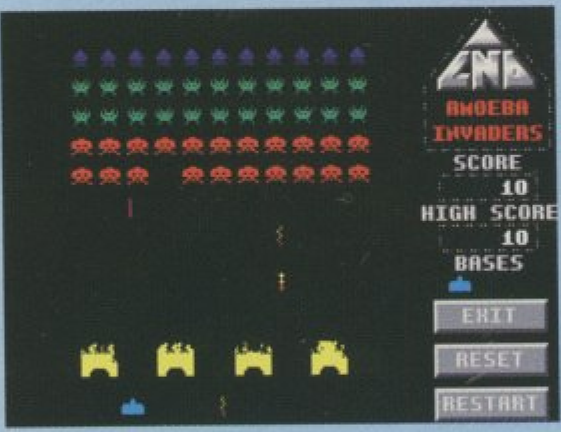


DPaint III has a habit of filling animation files with excess (harmless) garbage like the remains of old stencils and brushes. Animation Bridge will strip this out, leaving the file up to 25% shorter.

In addition to its easy to use Intuition interface, there's also an ARexx port which may be of use to folk who routinely process animations, and hate overworking the mouse.

Better still, if you send $20 to Ron Tarrant and Mythra-mations Animation and Software, you get an Animation Bridge which doesn't keep interrupting you and asking for money.

Some day, all animation packages will completely understand one another. Until that day arrives (and the sun sets in the east) we'll have to use Animation Bridge.



Game of the month
Amoeba

SOMETIMES, when things aren't going quite right in my world, something reliable and simple, and above all, ridiculously violent, is required to get things right again. And what could be simpler than Space Invaders?

No-one's quite sure why Space Invaders is so much fun. Perhaps it panders to the destructive side of human nature. Perhaps it is fuel for natural xenophobia. Whatever it is, it's a wonderful way of hammering the crap out of moving targets at no personal risk whatsoever.

Amoeba Invaders is an old game, conceived a considerable number of moons ago by The LateNight Developments Corporation. Nothing has been added to the stark playability of the original Taito machine, save for the addition of colour. After all, the first Invaders boxes were strictly monochrome, so it shows how far we've come in the last twelve years, as long as we discount machines like the NeXT.

For those of you who remember colour Space Invaders, that was achieved by the technological miracle of strips of coloured plastic stuck to the monitor. The Invaders at the bottom started out red, but the other ones went that way as soon as they hit the red band. And we go to all the bother of copperlists to achieve the same. Sigh. Call that technological devopment?

To be really pedantic, Amoeba Invaders adds the heady delights of a score that doesn't "clock" at 10000 points. Talk about the march of progress.

The original source of Amoeba Invaders is Fish Disk 120, but it's so old that nearly every PD collection has it tucked away somewhere. Check the bulletin boards too – it's pretty small, so it shouldn't break the phone bill if you download it.

Mach II

I know a lot of people who like to have a clock on the Workbench screen. I never use a clock myself, preferring Russell's Three Rules for Healthy Living. These are: Eat if hungry, Drink Coffee if tired, and Sleep if nose touching keyboard.

Summarising all the PD clocks would be a huge and futile task. Imagine – "This one tells the time. So does this one. This one likewise". So here is something not entirely different, but nearly.

There are many Freely-Distributable programs which are best described as Mouse-Accelerating, Screen-Shuffling, Window-To-Front, Auto-CLI, Mouse-Blanking, Screen-Blanking, Auto-Window-Activating, Configuration-Saveable Clock Utilities (With Added Hotkeys), or MASSWTFACLIMBSBAWACSCU(WAH) for short. Some are big (like MachII,

which takes up 44k of disk space) and some are small (QMouse, just over 4k). Most of them are quite remarkably clever.

MachII (Fish Disk 254, unspecified Shareware amount) is quite the most feature packed MASSWTFACLIMBSBAWACSCU(WAH) available. In its standard configuration, it displays the time and free memory, alternating with the date, in a window in the screen titlebar. This window floats to the top of the screen, and will even float to the front screen. This is cheating Intuition a little, and it can be disabled if problems occur.

One of the most thoughtful features included in MachII is its ability to remember qualifier keys (Alt, Shift, Ctrl and the Amiga keys). This means that instead of having to press keys all together (such as Ctrl-C) you can press them individually for the same effect (Ctrl, then C). This could be useful for those with impaired hand movement, or indeed anyone who's ever experienced joys such as Ctrl-Right-Amiga-F5.

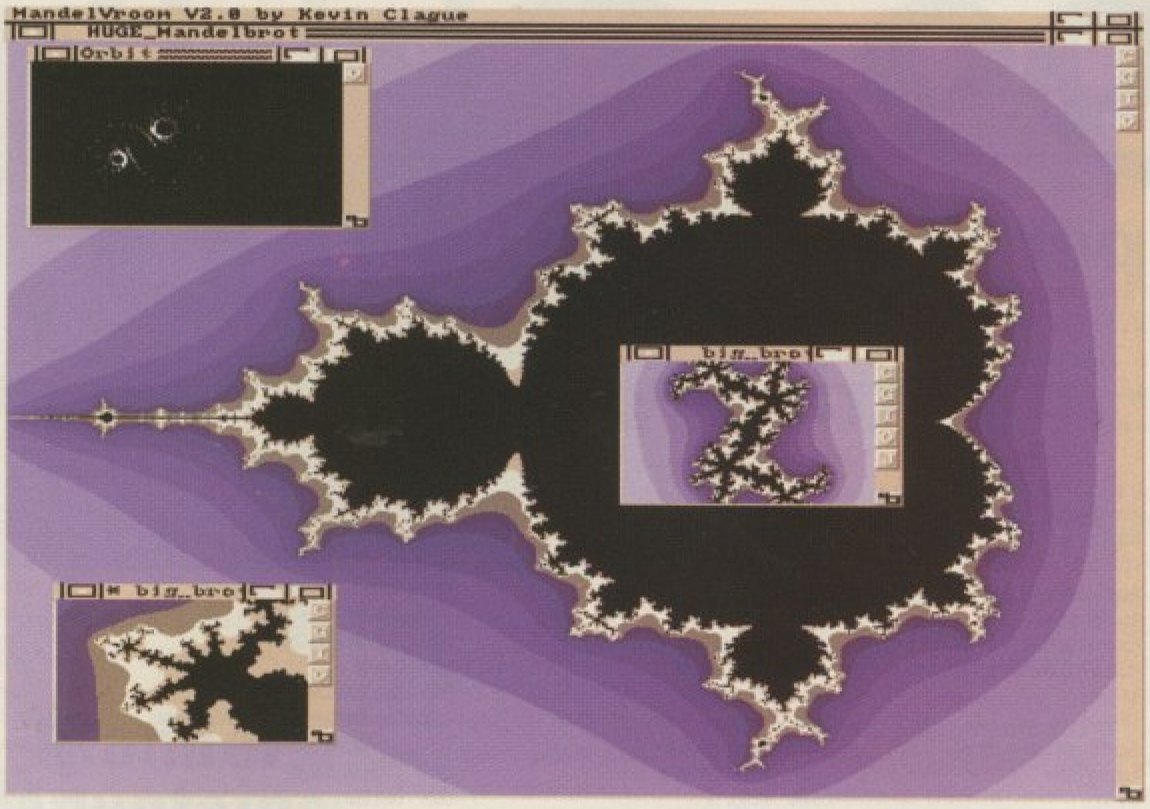
Configuring MachII is pretty easy. Hit the mouse Menu button in MachII's clock window, and the auxiliary SetMach program is called up. This presents you with a mass (nay, a plethora, even) of gadgets, each controlling a different operational nuance. You'll need to dive into the documentation to work out what everything means, so maybe configuration isn't so easy after all.

If you don't like wasting space, try QMouse. It has all the really useful features of MachII, except for the remember qualifier keys routine. It also has the smallest clock around – it will fit between the "Workbench release" and the free memory display. It's also under 4000 bytes long.

QMouse can be configured using a long set of CLI arguments, or by creating a config file with a text editor. This may seem a little unfriendly, but if you follow the documentation it isn't a problem.

Version 1.6 of QMouse is on Fish Disk 262, and there's a $10 Shareware fee. It's the sort of program that a lot of BBS's have, and it cost me just over 10p in phone charges to download the Qmouse archive over a noisy, long distance phone line. Few PD libraries can offer that kind of value for money.





Mandelvroom

HEY, aren't those Mandelbrot set thingies real purty? No? Phil E. Stein's, the lot of you. I happen to like them, but then I've always felt comfortable with complex numbers, matrix maths and zero-survivability situations.

The trouble with most Mandelbrot set generators is that they expect you to be able to key in huge quad-precision coordinates, and then they laugh at you for ten hours while they render a screen of total blackness. Would it not be PDH (Pretty Damn Hip, if you hadn't twigged) to just point and click on your very own A To Z of the z -> (z*z)+C ?

Such is MandelVroom 2 from Kevin Clague. You never, ever need get your hands dirty with vast floating point constants – nor do you ever need to spend hours waiting to see if you've turned up an interesting bit of graphics, or a window full of black.

By creating a new window, and then zooming into an existing window on the set, you get a rough idea of what your picture should look like instantly, since at first MandelVroom will merely magnify pixels from the old window. Once you start rendering, the picture will gain detail.

Nor do you need to hang around while the iterations are strutting their stuff. The program sports optimised maths routines for extra speed, but will render any number of Mandelbrot and Julia sets simultaneously.

You don't get summat for nowt, so multitasking slows everything down a little.

Extensive online help is available on just about every feature, so you won't have to read the huge doc file. Many of the screen manipulation tools work just like DPaint, so most people will know what to do with the Palette and Cycling tools.

Mandelvroom supports every screen mode except HAM, and will auto-detect faster processors and extra number crunching chips. The only thing that you really must have is 1 meg of RAM to use all the functions, but it will run (sort of) on a stock A500.

Intuition is used really well – lots of programmers could learn from this example. In fact, they can – Fish Disk 214 contains all the C source, which is reasonably well commented.

MandelVroom 2.0 is certainly the friendliest introduction to fractal fun, and lives, along with plenty of pregenerated images, on Fish Disk 215.

SRT

HMM. Yet another "Replace volume X in any drive" System Requester. I wonder who thought up that particular gem of popular prose ? It may do the job, but it's dull, so let's change it.

Huh? Change System Requester Text? Most people, after much erming and humming, would conclude that, short of reburning the ROM, this kind of task is far more difficult than it is urgent, and they go back to their own interactive multihypermedia devices.

But wait. A little System Requester we've all met is "Software error – task held". This has been known to reduce grown writers to visible gibbering, and is unpleasant in extremis. We might as well put in some code to catch the Software error, and render it less harmful.

Carolyn Scheppner's SRT allows both of these things. By creating a text file of alternate Requester texts, SRT will replace the boring CBM ones with your own wacky creations. The supplied example file is a little Middle-Earthish, with Track Trolls, Disks of the Clan of DOS and captive Printer Dwarves.

You can change any text to anything you want. It's best to stick to something roughly sensible, since "Error validating disk" maybe be dull, but it has loads more relevance than "Goo boogle acka zacka".

If you replace the dreaded "Software error" text with "DEBUG", you get a full register dump the next time an error would have occurred. You also get the chance to suspend the errant task, or to

reset the machine. A suspended task can do no further damage, except that crashed CLI commands won't allow the CLI to close.

Except for the Guru Protection, SRT (TBAG 28) is little more than a bit of fun. It allows the machine to be customised the way you like it, and may also make your days less fraught.

Memguard

EVER had a totally reliable program crash on you for no readily apparent reason? It's kind of worrying. It will often happen if you try some new and possibly dodgy software, then take a trusted workhorse out for a canter. Whap Bang, a face full of red hex with a flashing border.

Quite often, the cause of this is Low Memory Corruption. The first few hundred bytes of memory contain some extremely important information which the system uses for finding libraries and managing interrupts. If a program sloppily patches some system information, then forgets to set them right, the system will crash quicker than the Stock Market.

A very well respected programmer thought about this, and wrote a lengthy C program to scan this area for changes. Unfortunately, it hogged 50% of the processor time. What was called for was an extremely tight piece of assembly language.

From the K-Seka assembler of Ralf Thanner comes Memguard IIIa, which installs a small interrupt routine to check the low memory for change. If a value is altered, an Alert (looks like a Guru, but is OK really) gives you the choice to restore or change the memory location's contents.

What's really incredible about Memguard is that it checks memory every video frame (50 times a second) yet uses only 2% of the processor's power. Since it's a very low level interrupt, using Forbid() to halt multitasking won't stop Memguard.

So now if you're programming, or just using software you're unhappy about, Memguard will keep you safe. Of course, if a really brutal program stomps on Memguard you'll be in for a crash. But then, if any program stomps another you're asking for a visit from the Red Flasher anyway.

Get the newest version of Memguard you can – version IIIa is on Fish Disk 354. Older versions aren't as clever or as reliable.

An accident with a monitor – but MemGuard stops it



Mandel Mountains

ALMOND BREAD has a lot to answer for, not least for its nutritional value. You see, in Germany, "Mandelbrot" is that very confection. Imagine going through life being called "Almond Bread" – almost as bad as "Russell". Well, Professor Mandelbrot certainly used his loaf to develop his fractal theories.

MandelMountains, rather than being a devious EC plot to stockpile all those hard-shelled nuts, is a Mandelbrot Set generator. Oh puh-lease, sez you, not another one. Well, yes, it is, actually, but this one's a bit different.

The standard view of the Mandelbrot set looks like the chromatograph of a squashed bug, given a little imagination – black in the middle, with a set of fringes which darken as they go out from the centre. MandelMountains uses a different approach – a 3D black plateau with silvery mountainsides sloping down from it. It's prettier to look at than describe.

This rendering technique (the Continuous Potential Method) is very processor-intensive. Not merely do you have to do all the usual convergence iterations, you also have to do a bit of 3D trigonometry to find out where the point should live. And as you have to do this for every pixel, one can settle down for a nice kip.

The world always looks brighter after a kip, and so the stupendous MandelMountains screens are incredible – the CPM makes Mandelbrot Sets and Julia Sets like a zany form of landscape.

Screens are saved as IFF, but with an additional chunk to hold data for MandelMountains. DPaint will ignore this extra information, but will not save it back out – so doctored MandelMountains pictures won't reload.

MandelMountains 2.0 is well worth its $10 registration fee – if you upgrade to a faster machine, MM will use the maths coprocessor. If you like Mandelbrot sets, have a hunt around Fish Disk 354 – you'll iterate until the cows come home.



Roadroute

IT IS nice to get from A to B, avoiding the jam-packed dual carriage way at C, the sheep track at D, and the section of motorway at E which has been coned off since Hadrian's lads built it. So how can you tell?

Usually, looking at a good roadmap will help a bit – save for the roadcones, that is. The old method of route planning involved a little rolling wheel thing which could be read off in miles, and the ability to follow the wiggliest road with absolute accuracy.

For some years now PC and ST owners have had AutoRoute, a delightful program which will tell the the quickest route to a reputable Amiga dealer. AutoRoute's authors considered piracy too rife in the Amiga scene to market AutoRoute Amiga, so the pirates' loss is our loss too. "Kill a pirate today" is the moral of the story.

Jim Butterfield, that guru of all things Commodore, had a need to work out his A to B without recourse to an A to Z. He produced an AmigaBASIC program to do the job, added some data from some motoring organisations, and created RoadRoute the First.

Like all AmigaBASIC creations, the first RoadRoute ran like a sloth in snooze mode. After a rewrite in C, RoadRoute is much quicker – but hardly all singing, all dancing. More like mostly barking hoarsely and gallumphing about in a vaguely syncopated manner, but it does work.

The other problem is, currently all the maps refer to the USA and to Canada. All we need now is for some patient, kind soul to type in distances between places in the UK and we're laughing. Don't wait for me to do this, as I have all the attention span of a caffeine-soaked shrew, and a hideous dislike for conic projections.

Roadroute doesn't draw maps, but then neither do the incredibly useful AA Computer Routes. All you do is type a Start, an End and a Via, and Roadroute will find the best way. It can either choose the Fastest or Shortest route, and estimates the time taken according to the US 55 mph speed limit.

RoadRoute is on Fish Disk 358, and is Freeway, erm Freeware. And don't let me stop you typing in maps for Great Britain...



Pdom PD Amiga Public Domain & Shareware Software

Suppliers of Public Domain and Shareware software for over 4 years, watch out for immitations!

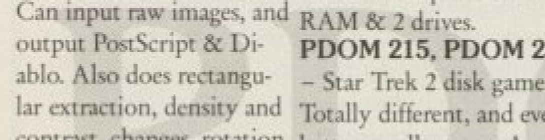
Graphics

AMP3 – Graphics Pack 1 Clip It! clip any part of the screen and save to disk, Filter Pics manipulate pictures with enhancers, edge definition, colour and size shifters, Amiga MCAD excellent CAD package. IFF to pieces jigsaw program, ROT 3D drawing prog, VDraw V1.19 brilliant painting program, Ray Tracer Generator.
A 3 disk pack only £7.50.
AMP21 – Graphics Pack 2 – DBW Render a very good Ray Tracing utility, Mandelbrot Explorer. Excellent full features mandelbrot designer, ST2IFF convert Atari ST pictures to Amiga IFF format. HAM Editor drawing program. HAM to IFF convertor.
A 3 disk pack only £7.50.
FFISH 295 – Mandel Mountains V1.1. Mandel Brot Generator.
FFISH 334 – FBM is an image manipulator and convertor : Sun, GIF, IFF, PCX, PBM bitmaps, Can input raw images, and output PostScript & Diablo. Also does rectangular extraction, density and contrast changes, rotation, quantization, halftone grayscaling etc. etc. etc.

Utility Stop Press! We have loads of excellent utility disk compilations. Our DiskCat has a fast search option for the best!

Games

AMP8 – Game Pack 1 – Clue as in Cluedo, Othello, Klondike, Canfield, Cribbge, ackgammon, Yahzee, TVision, Missle ommand, Cosmo 2, 3D Breakout, Empire, Gravity Wars, Hanoi, Hockey, ikoff, Jackland, Othello Master, Pacman, all rilliant PD games. 3 disks only £7.50!
AMP22 – Games Pack 2 – Amoeba space invaders, CosmoRoids, Stone Age a Boulder Dash type, Back Gammon, Chain Reaction, Master Mind, Reversi, Black Jack, Crazy Eights , Klondike, Jig Saw, Keno, YachtC, Daleks, Ratmaze, Monopoly and Escape From Jovi the excellent game.
A 3 disk pack only £7.50.
PDOM 90 – Tennis! The best shareware game on the Amiga. Excellent! Requires 1Mb of RAM.
PDOM 79, PDOM 80 & PDOM 81 – Star Trek 3 disk game. Amazing graphics! Fully working. Brilliant! Requires 1MB RAM & 2 drives.
PDOM 215, PDOM 216 – Star Trek 2 disk game. Totally different, and even better excellent game! Requires 2 drives.
PDOM 233 – The Holy Grail Adventure Requires 1MB RAM. Excellent adventure!
PDOM 234 – The Golden Fleece Adventure.
PDOM 283 – Callisto, Daleks, Pontoon, Puzz, World & Zerg.



Utility

FFISH 327 – Msh handles MSDOS/ST formatted disks. You can use files on such disks in almost exactly the same way as you use files on native AmigaDOS disks. This is a fully functional, read/write version.
PDOM 62 – The Public Dominator Anti Virus Disk contains all you need in the fight against viruses.
FFISH 342 – IE V1.0 is an icon editor up to 640x200 pixels in size also dual render. Fully featured.
FFISH 244 – Boot Block Champion V3.1 load, save and analyze boot blocks. BootIntro V1.2 you specify The headline text of upto 44 characters and the scrolling text of upto 300.
PDOM 278 – LHARCa V0.99a the file compressor 100% compatible with MSDOS LHARC V1.13c.
AMICUS 22 – Printer Driver Generator V2.3.
TBAG 28 – MachII features: configurable, your help screen, mouse accelerator, PopCLI, Screen Blanker, Mouse OFF, Sun Mouse, Click To Front, Cycle, Window and Screen Shuffler, CLock, Alarm, Beeper etc.
TBAG 30 – MyMenu create your own menu on WB to run any comands. Icon Meister V1.4 THE Icon editor.
TBAG 31 – ShoWiz V2.0 show ANY picture with or without a script 1 picture or several disks full, also play a music file in the background! Also show text files in any colour!
PDOM 279–ESA utility disk 1 the excellent compilation of 3 dozen utilities!

Application

AMP1 – Home Business Pack : UEdit word processor, Visicalc spreadsheet, RIM and Hyperbase databases and spell checkers etc. 3 disks only £7.50!
APDC 17 – 2 Micro Emac editors: Micro GnuEmacs MicroEmacs.
FFISH 144 – Analyticalc V22.3D is a large & powerful spreadsheet program requires 1MB RAM and one floppy.
AMICUS 17 – Communications: COMM v1.33, Aterm V7.2, VT–100 V2.6, VTek V2.3.1, Amiga Host V0.9 for Compu–Serve.
FFISH 195 – Micro Emacs V3.10 the editor which is very comprehensive.Includes source and extensive on line documentation.
FFISH 219 – Deep Sky V5.0 is a database containing info on 10,368 non–stellar objects, 600 colour contrasting easily resolved double stars, 70 stars for setting circles and miscellaneous white dwarfs, red starsetc. The whole lot is ZOOd (archived) down to fit onto the disk and will unZOO to 1.2 Mb of info. ZOO is not supplied.

PDOM Clip It! Vol1. Nearly 3Mb of clip art in standard IFF format. Subjects covered are varied but are mainly: sports, flags, animals, cartoons, humorous, Christmas, Jewish, borders, Halloween, Valentines, horses, eyes, alphabets, hands, 1930's trade marks, zodiac, cars and many more. All compatible with DPaint II. All in black and white. 5 disks full.

Miscellaneous

PDOM 211 – NorthC the latest all features excellent C compiler. Suitable for beginners and the knowledgable alike. Fully comprehensive.
FFISH 337 – CManual V1.0 is a complete C manual for the Amiga which describes how to open and work with screens, windows, graphics, gadgets, requesters, alerts, menus, IDCMP, sprites, etc. Includes huge manual file and over 70 fully executable examples with source code. When unpacked fills up 3 disks.
FFISH 314 – A68k v2.61 the 68000 macro assembler. Excellent.
FFISH 339 – PCQ V1.1cis a freely redistributable, self compiling, Pascal compiler. The only major feature of Pascal that is not implemented is sets.
FFISH 349 – MED V2.0 is a music editor much like SoundTracker with MIDI sequencing.
AMP11 – 5 disks full of Sonix files with the PD Sonix player. £12.50!
AMP23 – 5 disks full of Soundtracker files includes Sound Tracker versions 1,2,3 and 4. £12.50!
PDOM 285 – Game Music Creator. Supports MIDI, can handle all types of samples –IFF with loops, Raw etc., both contignous and pattern recording, Note half stepup/down function, 64 patterns in memory, can load both Soundtracker & SoundFX songs (converted with GMC conv.), Replay routine brutally much faster than Soundtrackers, Includes Pattern break, Position jump etc etc...

Demos

PDOM 212 – Red Sector CEBIT '90 demo. Another excellent demo from RSI!
PDOM 213 – Rebels Coma demo an absolutely brilliant non stop demo totally different, and very original!
PDOM 214 – Fractal Flight. Created by HyperCube Engineerings' fractal landscape generator Requires 1MB RAM BRILLIANT!
PDOM 148 – Escape from Singes Castle another amazing animation demo of the interactive game. Excellent follow up to Space Ace!
PDOM 1 – The Walker Demo I is a mega animation demo that requires 1Mb RAM.
PDOM 2 – The Walker II the mega mega animation demo that requires 1Mb RAM.
FFISH 196 – Stunning digitised HAM pictures. Excellent! The quality is astounding.
PDOM 27 – Alcatraz Mega Demo II. Mega!!
PDOM 65 & PDOM 66 Red Sector Mega Demo. THE best demo on the Amiga! Amazing graphics, fabulous sounds, astounding vector graphics!
PDOM 73 – Star Trek Enterprise Leaves Dock.
PDOM 74 – Star Trek 4 animations of Star Trek craft.
PDOM 76 – Star Trek Shuttle landing on a Star Trek craft.
PDOM 83 – Space Ace demo. Excellent aniamtion with excellent sampled sound!.

We've always got the latest Music and Graphic demos. Our DiskCat has a fast search option for the best!

To order, simply quote the disk code number given in bold.
Prices: 1 to 5 disks are £3.00 each,
6 to 10 £2.75 each,
11 or more £2.50 each.
All orders sent by first class post.

All prices are fully inclusive. To order please send a cheque or postal order payable to Pdom PD Amiga or Access & Visa credit card details to:
Pdom PD Amiga AC, P O Box 801,
Bishop's Stortford, Hertfordshire, CM23 3TZ.
Tel 0279 757692.

WORLDWIDE SOFTWARE
106A Chilwell Road, Beeston,
Nottingham, NG9 1ES

WORLDWIDE ·SOFTWARE

WORLDWIDE SOFTWARE
106A Chilwell Road, Beeston,
Nottingham, NG9 1ES

- FREE Catalogue Disk (Plus latest demos when available) with every order over £10.00
- All orders despatched by 1st class post
- Quality products at keenest prices
- 7 day 24 hour ordering
- Credit card accounts debited only on despatch of goods
- Complete customer satisfaction is our aim

Order by Telephone: Credit card order lines
0602 252113 0602 225368

by Fax: Fax your order with credit card details
0602 430477

by Mail: Send payment with order

Please give your name, address, telephone no., software title, price advertised and computer type.

Worldwide Pack 1
Amiga Second Drive
+ Any three software titles with our advertised price of £17.95 or less
ONLY £109.99

Worldwide Pack 2
Amiga Second Drive
+ Any two software titles with our advertised price of £17.95 or less
ONLY £99.99

Worldwide Pack 3
Amiga 1/2 meg upgrade
+ Any two software titles with our advertised price of £22.95 or less
ONLY £89.99

AMIGA SOFTWARE

1st letters and Words (3-8 years)	17.95
4 Player Adaptor	5.95
688 Sub Attack	17.95
9 lives	17.95
Accolade in Action	22.95
Action Stations	22.95
Adidas Championship Football	17.95
Advanced Tactical Fighter 2	17.95
Alpha Waves	17.95
AMOS	39.99
Anarchy	14.95
Apprentice	14.95
Armour Geddon	17.95
Atomic Robokid	17.95
A.W.E.S.O.M.E.	28.95
Back to the Future 2	17.95
Badlands Pete	14.95
Badlands	14.95
Bar Games	17.95
Bards Tale 2	9.99
Battle Command	17.95
Battlemaster	22.95
BAT	22.95
Betrayal	22.95
Better Maths (12-16 years)	17.95
Better Spelling (9-14 years)	17.95
Billy the Kid	17.95
Blade Warrior	17.95
Blinkys Scary School	7.99
Blitzkrieg Battle at Ardenns	22.95
Blitzkrieg May 1940	17.95
Bomber Bob	17.95
Bomber Mission Disk	14.99
Breach 2 1 Meg	17.95
Bridge Player 2150	22.95
BSS Jane Seymour	17.95
Buck Rodgers	22.95
Bukokan	17.95
Bug Bash/Nucleus	9.99
Cadaver	17.95
Captive	17.95
Carthage	17.95
Champions of Krynn 1 Meg	22.95
Champions of the Raj	17.95
Choas Strikes Back (1 Meg)	17.95
Chase HQ 2	17.95
Chess Simulator	17.95
Chessmaster 2100	22.95
Chronicles of Omega	14.95
Chuck Yeager Flight Trainer	19.95
Codename Iceman (1 Meg)	28.95
Colonels Bequest (1 Meg)	29.99
Conquests Bequest (1 Meg)	29.99
Corporation	17.95
Crime Does Not Pay	17.95
Crime Wave	17.95
Days of Thunder	17.95
De Luxe Scrabble	14.95
Death Trap	17.95
Debut	17.95
Defender 2	14.95
Dick Tracy	17.95
Dinosaur Discovery (3-8 years)	17.95
Distant Armies	17.95
Dragon Breed	17.95
Dragon Flight	22.95
Dragon Force 1 Meg	22.95
Dragon Wars	22.95
Dragons Breath	22.95
Dragons of Flame	17.95
Dungeon Master Editor	7.99

AMIGA SOFTWARE

Dungeon Master (1 Meg)	17.95
Edition One	17.95
Elite	17.95
Enterprise	14.95
Epic	17.95
Extase	14.95
F16 Combat Pilot	17.95
F16 Falcon and Mission Disk	28.95
F16 Falcon Mission Disk 2	14.95
F16 Falcon Mission Disk	14.95
F16 Falcon	22.95
F19 Stealth Fighter	22.95
F29 Retaliator	17.95
Final battle	17.95
Final Command	17.95
Final Conflict	22.95
Finest Hour Battle of Britain	22.95
Fire and Forget 2	17.95
Fire Brigade 1 Meg	22.95
Flight of the Intruder	24.95
Flight Sim 2 Hawaii Scenery	11.99
Flight Sim 2 Scenery 11	14.95
Flight Sim 2 Scenery 7	14.95
Flight Sim 2 Scenery 9	14.95
Flight Sim 2	28.95
Flimbos Quest	17.95
Flipit and Magnose	17.95
Flood	17.95
Frontline	17.95
Fun School 2 (6-8 years)	14.95
Fun School 2 (Over 8 years)	14.95
Fun School 3 (5-7 years)	17.95
Fun School 3 (Over 7 years)	17.95
Fun School 3 (Under 5 years)	17.95
Fun School 2 (Under 6 years)	14.95
Future Basketball	17.95
Gettysburg	22.95
Gold of the Aztecs	17.95
Golden Axe	17.95
Grag Normans Ultimate Golf	17.95
Gunship	17.95
Hardball 2	17.95
Harley Davidson	22.95
Helter Skelter	14.95
Heroes Compilation	22.95
Heroes Quest 1 Meg	26.95
Hollywood Collection	22.95
Hooray for Henrietta (Maths 5-12 years)	17.95
Horror Zombies	17.95
Imperium	17.95
Indianapolis 500	17.95
International 3 D Tennis	17.95
International Soccer Challenge	17.95
It Came From the Desert (1 Meg)	22.95
Italy 1990 Winners edition	14.95
Jack Nicklaus Golf	17.95
Jack Nicklaus International. Courses	11.99
James Pond Underwater Agent	17.95
Judge Dredd	14.95
Khalaan	17.95
Kick Off 2 Expanded	17.95
Koik Off 2 plus World Cup 90	17.95
Kick Off 2	14.95
Killing Game Show	17.95
Kings Quest 4	26.95
Knights of Crystallion	22.95
Last Ninja 2	17.95
Legend of Billy Boulder	17.95
Legend of Faerghail	22.95
Legend of the Lost	17.95
Leisuresuit Larry 2	26.95

AMIGA SOFTWARE

Leisuresuit Larry 3 (1 Meg)	29.99
Leisuresuit Larry	17.95
Lets Spell at Home	14.95
Lets Spell at the Shops	14.95
Lets Spell Out and About	14.95
Lets tell Christmas Stories	14.95
Life and Death	22.95
Loom	22.95
Loopz	14.95
Lost Patrol	17.95
Lotus Esprit Turbo Challenge	17.95
M1 Tank Platoon	22.95
Magic Fly	17.95
Magic Maths	17.95
Manchester United	17.95
Manhunter San Franscico	22.95
Maniac Mansion	17.95
Manix	17.95
Maths Mania	17.95
Mathtalk (5-13 years)	17.95
Matrix Marauders	14.95
Mean Streets	17.95
Midnight Resistance	17.95
Midwinter	22.95
Might and Magic 2	22.95
Mindgames Strategy Compilation	17.95
Monty Python	17.95
Mr Doo Run Run	11.99
Murder	17.95
Music X Junior	68.95
NARC	17.95
Necronom	17.95
Neuromancer	17.95
Never Ending Story	22.95
New York Warriors	14.95
Night Breed	17.95
Ninja Spirit	17.95
Ninja Warriors	14.95
Nitro	17.95
Obitus	26.95
Omnicron Conspiracy	17.95
Operation Harrier	17.95
Operation Spruance	17.95
Operation Stealth	17.95
Oriental Games	17.95
Over the Net	17.95
Overrun	22.95
Pang	17.95
Paradroid 90	17.95
Pipemania	17.95
Pirates	17.95
Patinum Compilation	17.95
Plotting	17.95
Police Quest 2 (1 Meg)	26.95
Pools of Radiance	22.95
Populous New Worlds	7.99
Populous	17.95
Power Pack	17.95
Powerboat USA	17.95
Powermonger	22.95
Pro Tennis Tour	17.95
Prof Looks at new Words	14.95
Prof Plays a new Game	22.95
Projectyle	17.95
Puzznic	17.95
Rainbow Islands	17.95
Raxerox	17.95
Reach for the skies	22.95
Red Storm Rising	17.95
Resolution 101	17.95
Rick Dangerous 2	17.95

AMIGA SOFTWARE

Riders of Rohan	22.95
Robocop 2	17.95
Rogue Trooper	17.95
Saint Dragon	17.95
Second Front	22.95
Shadow of the Beast 2	28.95
Shadow of the Beast	17.95
Shadow Warriors	17.95
Shock Wave	17.95
Silent Service	17.95
Sim City Terrain Editor	14.99
Sim City	22.95
Simulcra	17.95
Sly Spy Secret Agent	17.95
Snowstrike	17.95
Speedball 2	17.95
Spell Book (4-9 years)	14.95
Spell Bound	14.95
Spiderman	17.95
Spindizzy 2	17.95
Spy Who Loved Me	17.95
Star Command	22.95
Starflight	17.95
Storm Across Europe	22.95
Stormovik	22.95
Street Hockey	17.95
Stun Runner	14.95
Super Off Road Racing	17.95
Supremacy	22.95
Sword of Aragon	22.95
Team Yankee	17.95
Teenage Mutant Turtles	29.99
The Cycles	17.95
The Final Conflict	17.95
The Immortal	17.95
The Keep	17.95
The Last Starship	17.95
The Light Corridor	17.95
The Plague	17.95
The Ultimate Ride	17.95
Their Finest Hour Battle Britain	22.95
Things to do with numbers (5-10 years)	14.95
Things to do with Words (5-12 years)	14.95
Tie Break	17.95
Time Machine	17.95
TNT Compilation	22.95
Toki	17.95
Torvak the Warrior	17.95
Total Recall	17.95
Tournament Golf	17.95
Triad Volume 3	22.95
Turrican	14.95
TV Sports Baseball	22.95
Ultima 5	22.95
UN Squadron	17.95
Universe 3	17.95
Unreal	22.95
U.M.S. 2	22.95
Vaxine	17.95
Vendetta	17.95
Venomwing	14.95
Venus the Flytrap	14.95
Viking Child	17.95
Voodoo Nightmare	17.95
War Jeep	17.95
Warhead	17.95
Welltris	17.95
Wheels of Fire	22.95
White Death	22.95
Wings of Fury	17.95
Wings (1 Meg)	22.95

AMIGA SOFTWARE

Wolfpack (1Meg)	22.95
Wonderland	22.95
World Championship Soccer	17.95
World Soccer	7.99
Wrath of the Demon	32.95
Xiphos	17.95
Yolanda	14.95
Ziriax	14.95

BUDGET TITLES

Advanced Fruit Machine Sim	6.99
Advanced Pinball Sim	4.99
Afterburner	7.99
Arkanoid 2	7.99
Backlash	4.99
Batman Caped Crusader	7.99
BMX Sim	4.99
Conflict	4.99
Drum Studio	4.99
Fast Lane	4.99
Flyfighter	4.99
Formula One Grand Prix	4.99
Guardian Angels	6.99
Hunter Killer	4.99
Impact	4.99
Nigel Mansell Grand Prix	7.99
Nitro Boost	4.99
On Safari	4.99
Operation Neptune	4.99
Postman Pat	7.99
Pro Powerboat Sim	4.99
R Type	7.99
Rock Star Ate My Hamster	4.99
Ruff n Ready	6.99
Skrull the Barbarian	4.99
Spidertronic	4.99
Super Hang On	7.99
Super Ski Challenge	4.99
Superbike Transam	4.99
Treasure Island Dizzy	4.99
Wicked	4.99
Wizzball	7.99
Yogis Great Escape	6.99

CITIZEN PRINTERS

Citizen 120D Plus	185.00
Citizen Swift 9	230.00
Citizen Swift 24	320.00

(includes free connecting cable)

MANNESMANN TALLY PRINTERS

MT81 (130/26 cps 80 column)	159.00
MT130/9 (300/75 cps 9 pin 80 column)	399.99
MT130/24 (300/150 cps 24 pin 80 col.)	499.99

(includes free connecting cable)

LOCKABLE DISK STORAGE BOXES

40 Disk Storage Box	7.95
80 Disk Storage Box	8.95
100 Disk Storage Box	9.95

JOYSTICKS

Cruiser (Black, Blue or Multicolour)	8.99
Quickshot 3 Turbo	9.95
Zip Stick Autofire	14.95
Competition Pro	12.95
Competition Pro Clear	13.95
Competition Pro Extra	14.95
Competition Pro Glo (Green)	17.49
Competition Pro Glo (Pink)	17.49
Cheetah 125 Plus	7.49
Racemaker	26.95
Speedking	9.99
Speedking Autofire	10.99

Europe (other than UK) Shipping costs are
£1.50 per disc for normal airmail
£2.50 per disc for express airmail

Please make cheques or postal orders payable to WORLDWIDE SOFTWARE

All prices include postage and packing in the UK

Not all titles released at time of going to press. Titles and prices subject to change

Outside Europe shipping costs are
£2.00 per disc for normal airmail
£3.00 per disc for express airmail

Evesham Micros

- ALL PRICES INCLUDE VAT & DELIVERY -

Buy with confidence from one of the longest established companies in their field, with a reputation for good service and prices. We have invested heavily in a computer system to enable our Telesales staff to provide up-to-the-minute stock information, coupled with highly efficient order processing. Our fully equipped Workshop enables us to carry out almost any repair on our premises. We feel sure that you won't be disappointed if you choose Evesham Micros.

AMIGA SPECIAL DEALS

All our A500 Packages include the following :

Goldrunner	Jaws	Wordwright (w/processor)
Leatherneck	Defcon 5	Nigel Mansell's Grand Prix
Karate Kid II	High Steel	Better Dead than Alien
Battle Squadron	Night Walk	Super Huey

Amiga 500 512K SCREEN GEMS Pack includes 'Night Breed', 'The Beast 2', 'Back to the Future 2', 'Days of Thunder', 'Deluxe Paint 2' and TV modulator **£379.00**

Amiga 500 1MB Screen Gems Pack includes our 512K RAM upgrade with clock fitted **£409.00**

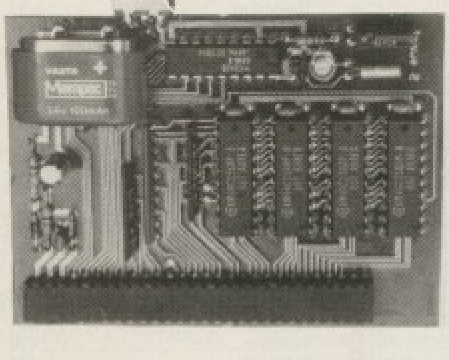
Amiga 500 512K Screen Gems Pack With Drive includes our 3$^1/_2$" External Drive **£430.00**

Amiga 500 1MB Screen Gems Pack With Drive features our 512K RAM upgrade plus our 3$^1/_2$" External Drive **£465.00**

Amiga 500 1MB CLASS OF THE 90's Pack includes A501 512K RAM Upgrade, TV Modulator, 8 software titles, 10 Disks, Mouse Mat, Video Tape and more **£549.00**

Amiga 500 1MB CLASS OF THE 90's Pack With Drive includes our 3$^1/_2$" External Drive ... **£600.00**

AMIGA A500 SOLDERLESS RAM UPGRADES



512K RAM UPGRADE

ONLY £37.95

including VAT & delivery

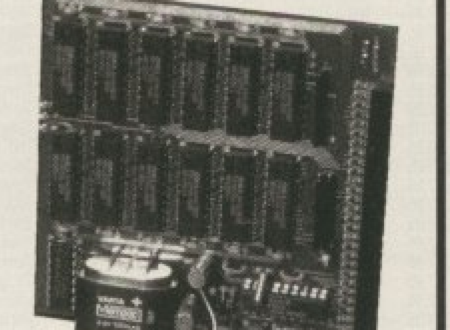
512K RAM/CLOCK UNIT FEATURES :

- ☆ Direct replacement for the A501 expansion
- ☆ Convenient On / Off Memory Switch
- ☆ Auto-recharging battery backed real-time Clock
- ☆ Compact unit size : Ultra-neat design
- ☆ Only 4 low power consumption FASTRAMs

512K RAM Expansion also available without clock for only £32.95

1.5MB RAM BOARD

- ☆ Fully populated board increases the total RAM in an Amiga 500 to 2MB !
- ☆ Plugs into the trapdoor expansion (as with 512K unit) and connects to GARY chip
- ☆ Includes Auto-recharging Battery Backed Real-Time Clock
- ☆ Socketed FASTRAM ICs for accommodating up to 1.5MB RAM



Unpopulated RAM Board with Clock £39.95

RAM Board as above, with 512K FASTRAM installed ... £59.95

RAM Board as above, with 1 Mb FASTRAM installed £74.95

RAM Board as above, fully populated, with 1.5Mb FASTRAM installed £89.95

N.B. : The expansion board Requires Kickstart 1.3 to operate - Kickstart 1.3 Upgrade available from us for £29.95

PHILIPS 15" FST TV/MONITOR

(MODEL 2530)

With its dedicated monitor input, this model combines the advantages of a high quality medium resolution monitor with the convenience of remote control teletext TV - at an excellent low price !

- ✔ Full infra-red remote control
- ✔ SCART Input/Output Connector
- ✔ Audio/Composite Video inputs
- ✔ FASTEXT Teletext
- ✔ 60 TV tuner presets
- ✔ Headphone private listening jack

ONLY £269.00 price includes VAT, delivery & cable



AMIGA ACCESSORIES

Philips CM8833 colour monitor inc. cable £249.00
Vidi-Amiga video digitiser package £95.00
Vidi-Chrome colour accessory for above £16.00
Vidi-RGB splitter accessory unit for VIDI £59.95
MiniGEN Genlock Adapter £95.00
KCS Power Board PC emulator package £289.00
5$^1/_4$" External Floppy Drive 40/80 track switchable (360/720K) with throughport ... £99.00
Naksha Mouse Package (also compatible with Atari ST and Amstrad PC) £28.95
TrueMouse superb quality replacement mouse, excellent value for money £17.95
Kickstart 1.3 Upgrade pack £29.95
Amiga Replacement Power Supply Unit (Genuine Commodore Amiga Type) £39.95
Amiga A500 Dust Cover .... £ 4.95

COMMODORE A590 HARD DRIVE

Good quality Commodore Hard Disk unit, including its own PSU and built-in cooling fan. Features sockets for up to 2Mb of on-board FASTRAM expansion (see below). 80ms Access time, with up to 2.4Mb/sec transfer rate. Autoboots when used with Kickstart 1.3.

A590 Hard Drive (20Mb) £289.00

40MB A590 Hard Drive Specially upgraded model for only £409.00

A590 RAM UPGRADES

Upgrade kit comprising of D-RAM FASTRAM IC's. We will fit the upgrade free of charge when bought with an A590.

A590 512K RAM Upgrade kit £31.95
A590 1Mb RAM Upgrade kit £59.95
A590 2Mb RAM Upgrade kit £99.95

GOLDEN IMAGE HANDY SCANNER WITH TOUCH-UP PACKAGE

Top value package including a high quality 100-400 dpi scanner with dither options. Scanner includes viewing window with backlight, plus a start control button, for accurate scanning every time. Scans either line-art (mono) or one of three greyscale options, at 100/200/300/400 dpi. The package includes the amazingly powerful, feature-packed 'TOUCH UP' graphics program which drives the scanner directly as one of its many facilities. Includes many image enhancement tools.

ONLY £149.00 including VAT and delivery

PRINTERS

Prices include VAT, delivery and cable

EVESHAM MICROS SPECIAL OFFER - ALL STAR PRINTERS INCLUDE 12 MONTHS ON-SITE MAINTENANCE !

Star LC10 top-selling 9-pin printer £159.00
Star LC10 Mk.II improved speed 180/44 cps £199.00
Star LC200 replaces LC10 colour, features bottom feed option and push/pull tractor, 180/45 cps £209.00
Star LC24-10 24 pin, excellent value £239.00
Star LC24-200 improved version of LC24-10: 200/67cps bottom feed option and push/pull tractors £249.00
Star LC24-200 Colour version of above LC24-200 .... £289.00
Star FR-10 9pin 300/76cps 16 NLQ fonts £369.00
Star FR-15 as FR-10, wide carriage £429.00
Star XB24-10 24pin; 4 SLQ, 25 LQ fonts £429.00
Star LC15 wide carriage vers. of LC10 .... £299.00
Star LC24-15 wide carriage vers. of LC24-10 .... £369.00
Star Laserprinter 8, 8ppm/300dpi £1329.00
Olivetti DM100S 9 pin printer 200/30 cps price includes 1 year on-site warranty ! £129.95
Olivetti cut sheet feeder for DM100S £79.95
Olivetti PG-306 laser; 512K RAM, HP compatible £976.35
Olivetti PG-306 as above, with PostScript fitted £1749.00
Epson LX400 budget 10" £159.00
Epson LQ550 10" 24pin £349.00
Epson LQ400 24pin printer £229.00
Panasonic KXP1180 multi-feature 9 pin £179.00
Panasonic KXP1124 24pin printer £259.00
Panasonic KXP1624 24pin wide carr. printer £399.00
NEC P2+ 192/64cps multifont 24 pin printer £239.00
Hewlett Packard Deskjet 500 - includes 3 years 'Return to Hewlett-Packard' Warranty £489.00
Hewlett Packard Laserjet III superior 300dpi laser £1595.00

AMIGA SOFTWARE

WORDPROCESSING	
Protext Version 5	£119.95
Kind Words Version 2	£39.95
ACCOUNTING	
Digita Home Accounts	£18.95
Digita Cashbook Controller	£39.95
Digita Final Accounts	£23.95
Digita Cashbook Combo	£55.95
SBA Cash	£62.95
SBA Extra	£89.95
SBA Plus	£179.00
GRAPHICS	
Deluxe Paint 3	£59.95
Deluxe Video 3	£59.95
MUSIC	
Dr.T Tiger Cub	£84.95
Music-X	£110.00
PROGRAMMING	
AMOS Game Creator	£37.50
AMOS Sprites	£11.95
HiSoft Lattice 'C'	£179.00
GFA BASIC Version 3	£39.95
GFA BASIC Compiler	£34.95
Hisoft Devpac 2	£44.95
GAMES AND SIMULATIONS	
Battle Squadron	£16.95
Damocles	£18.95
Emlyn Hughes	£18.95
F-19 Stealth Fighter	£22.50
F-29 Retaliator	£18.95
Kick Off 2	£18.95
Sideshow	£14.95
Treasure Trap	£16.95
MISCELLANEOUS	
Super-Plan Spreadsheet	£74.95
Superbase Personal Version 2	£69.00
Digita DG-Calc	£31.95

3½" EXTERNAL DRIVES



- Very quiet
- Slimline design
- Cooling Vents
- Sleek, high quality metal casing
- Suits any Amiga
- Quality Citizen drive mechanism
- On / Off switch on rear of drive
- Full 880K Formatted capacity
- Throughport connector
- Long reach connection cable

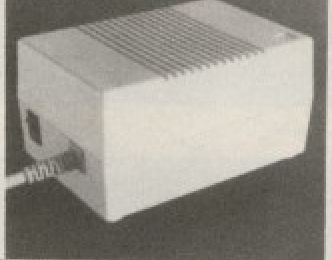
Superb low price!
£59.95
including VAT and delivery

5.25" External 40/80 Track Drive also available, only £99.00

Evesham Micros *Amiga Accessories*

REPLACEMENT A500 P.S.U.

Genuine CBM Amiga A500 type replacement power supply unit. Good quality switch mode type. Super low price !



ONLY £39.95

'TESSA'

twin ergonomic stereo speakers, amplified



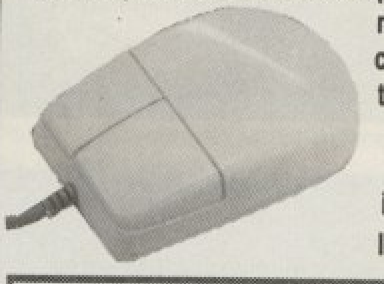
HEAR THAT STEREO!

Your Amiga produces excellent quality hi-fi stereo sound. Enjoy sound reproduction to the full with this twin speaker system! Uses a specially designed amplifier with volume control, to obtain the best sound.

ONLY £34.95 Including VAT and Delivery

TRUEMOUSE

WE GUARANTEE that this is the smoothest, most responsive and accurate replacement mouse you can buy for the Amiga. Excellent design, incredible low price !



ONLY £17.95

MIDI INTERFACE

GET CONNECTED!

Our new fully compatible, high quality MIDI interface connects directly with the Amiga serial port and provides IN, OUT and THRU ports for good flexibility. Features LED indicators on each port to assist ease of use and also for diagnostic purposes. Superb compact design.

ONLY £19.95

KRAFT TRACKBALL

EFFICIENT MOUSE OPERATION - IMPROVED GAME PLAY !

Very high quality trackball, directly compatible to any Amiga, ST or CBM'64, plus many others. Operates from the mouse or joystick port, and features selectable drag control / autofire button for versatility and better action. Left or right hand use, with total one handed control. Top quality construction and opto-mechanical design, delivering high speed and accuracy every time. No driver software required!



ONLY £44.95

STEREO SOUND SAMPLER

S-S-SAMPLE THIS !

Offering full compatibility with almost any Amiga audio digitiser software, our Sound Sampler features excellent circuitry, yielding professional results. The main A/D converter gives a digitising resolution of up to 50KHz, with a fast slew rate. Two phono sockets are provided for stereo line input, plus an option for microphone. Adjustable gain is achieved with built-in control knob. Complete with public domain disk containing sound sampling applications / utilities.

ONLY £29.95

Evesham Micros

ALL PRICES INCLUDE VAT AND DELIVERY
Same day despatch whenever possible. *Express Courier* delivery £5.00 extra.

RETAIL SHOWROOMS

63 Bridge Street, Evesham, Worcs WR11 4SF
☎ 0386-765180
fax : 0386-49761
Open Mon - Sat, 9.00 - 5.30

5 Glisson Road, Cambridge CB1 2HA
☎ 0223-323898
fax : 0223-322883
Open Mon - Sat, 9.30 - 6.00
Specialist Education Centre

1762 Pershore Road, Cotteridge, Birmingham B30 3BH
☎ 021-458 4564
fax : 021-433 3825
Open Mon - Sat, 9.00 - 5.30

MAIL ORDER DEPARTMENT

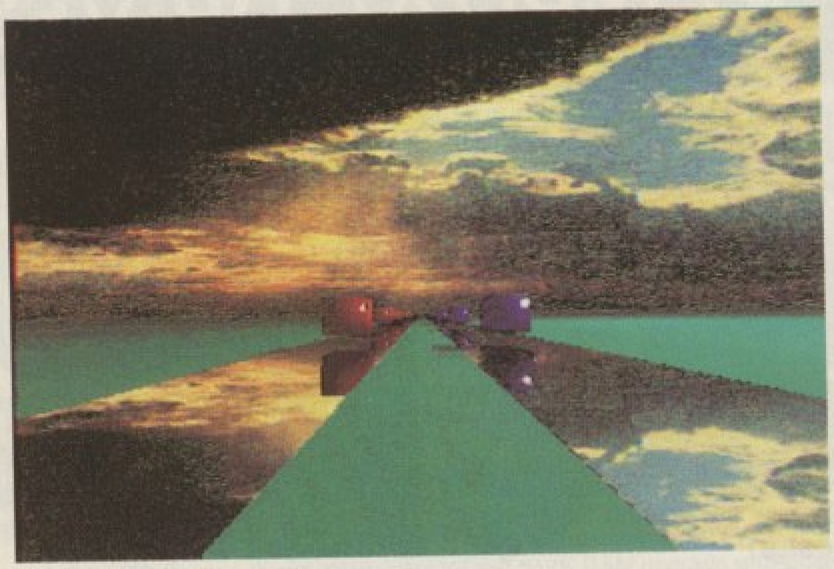
Unit 9 St Richards Rd, Evesham, Worcs WR11 6XJ

Call us now on ✆ 0386-765500
8 lines, Open Mon - Sat, 9.00 - 5.30. Fax : 0386-765354
Technical support (open Mon - Fri, 9.30 - 5.30) : 0386-40303

Access · VISA

Send an Order with Cheque, Postal Order or ACCESS/VISA card details. Allow 10 days personal cheque clearance.

Government, Education & PLC orders welcome. All products covered by 12 Months Warranty. All goods subject to availability, E. & O.E.

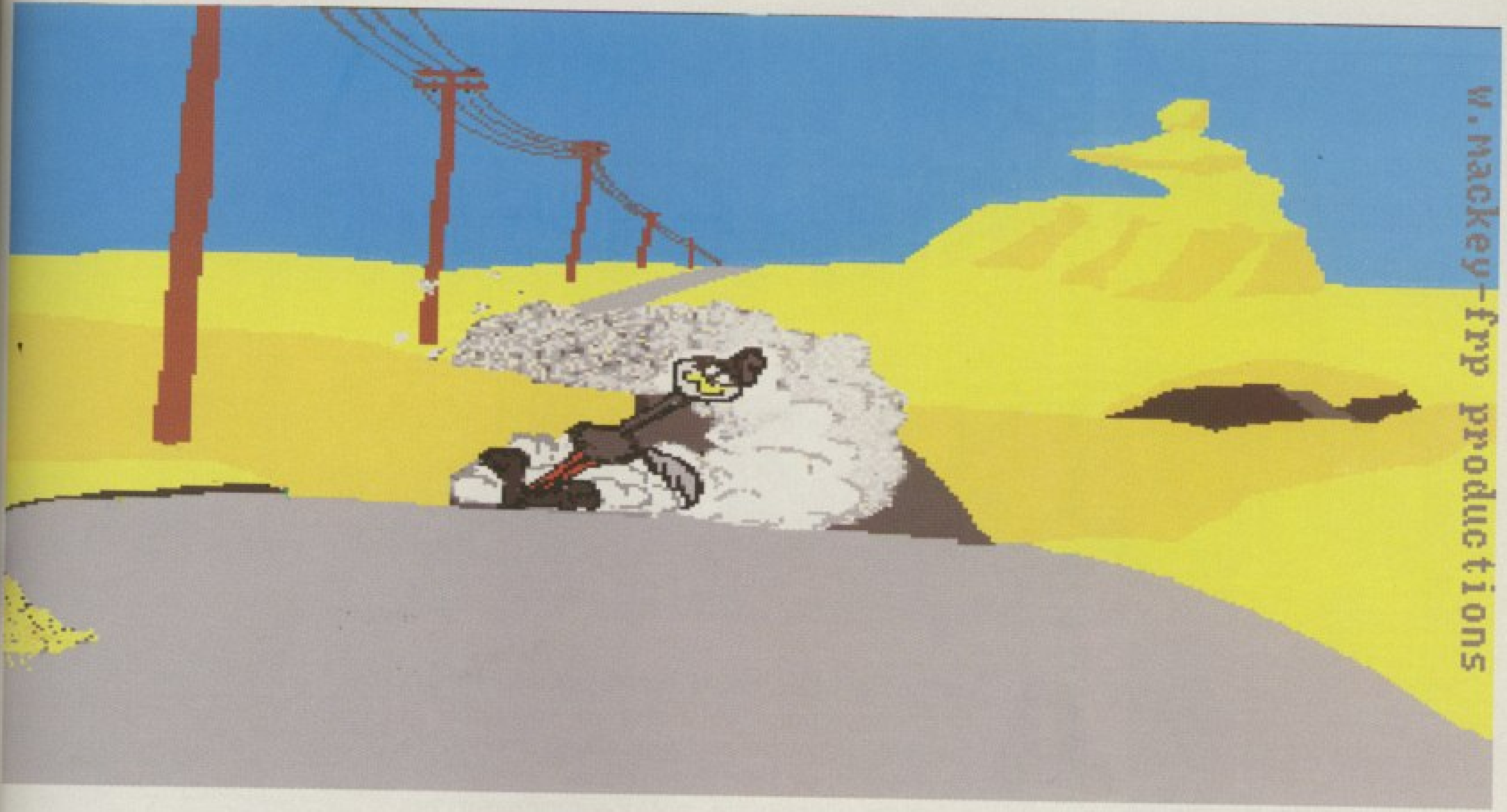










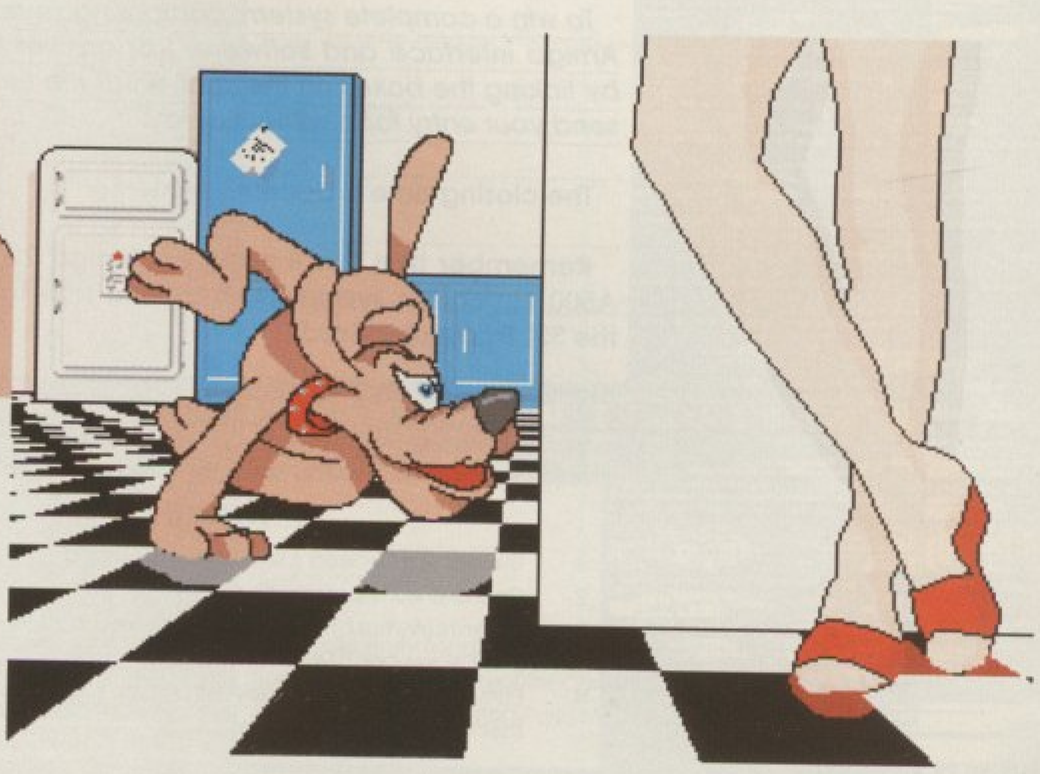


the Gallery

Here are some of the winners from the recent annual animation competition held by Amiga Centre Scotland.

The competition once again drew a huge number of very professional looking efforts - so professional that a large percentage were actually submitted already edited onto video tape.





Win the ultimate processor accelerator!

A peripheral which could accelerate your Amiga to phenomenal speeds and put you firmly at the forefront of parallel processing is about to be released by Solid State Leisure.

Imagine a system which uses, not one processor, but seven! Seven lightning-fast processors, all linked together for maximum flexibility and speed.

Forget 68000s, 68010s or 68020s – this system uses the latest solid state technological miracle: the Transputer, a complete computer-on-a-chip.

Each Transputer has input and output via bidirectional high speed serial links, a super-fast static ram cache and a powerful processor.

The Transputers can be linked in a chain, a ring or a tree structure depending on the task in hand. Passing data between Transputers is made easy with the specially developed programming language OCCAM.

Such a powerful multi-processor network is every hacker's dream. Incredible power for image processing, number crunching, artificial intelligence: Your ingenuity is your only limit!

A set-up like this would be the envy of several universities – but you could have it running in your Amiga 2000 if you win our competition.

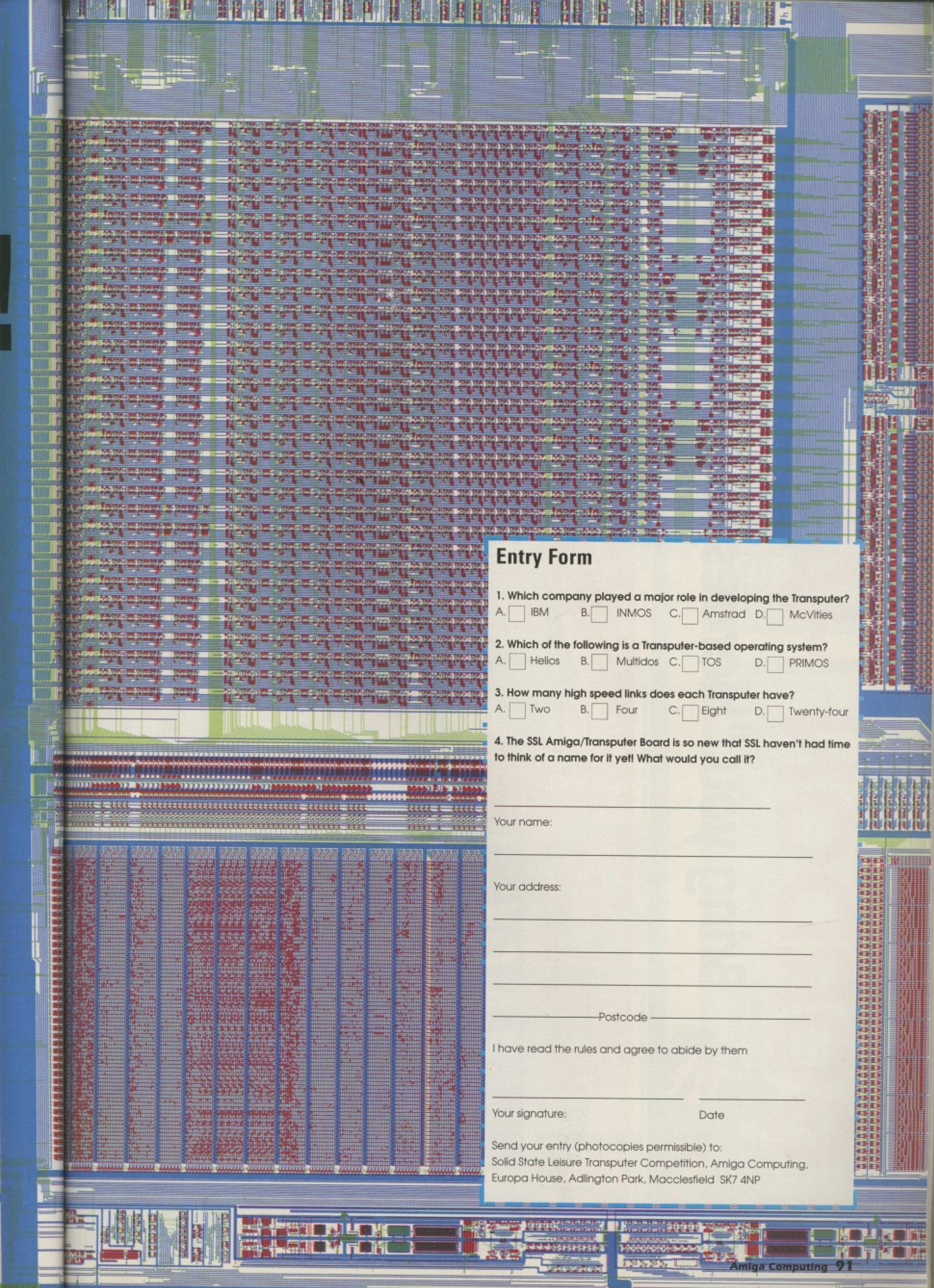
To win a complete system, comprising seven Transputers, Amiga interface and software, just answer the questions by ticking the boxes on the right, finish the tie-breaker and send your entry form without delay.

The closing date is December 31.

Remember that you'll need an Amiga 2000 or suitable A500 expansion system (with a Zorro slot) to make use of the SSL Transputer Card.

Rules

1. The editor's decision is final (however stupid).
2. Only one entry per person.
3. All entries must have been received by the closing date: 31st December 1990.
4. Entry is not open to employees of Interactive Publishing, SSL and their associated companies.



Entry Form

1. Which company played a major role in developing the Transputer?

A. ☐ IBM B. ☐ INMOS C. ☐ Amstrad D. ☐ McVities

2. Which of the following is a Transputer-based operating system?

A. ☐ Helios B. ☐ Multidos C. ☐ TOS D. ☐ PRIMOS

3. How many high speed links does each Transputer have?

A. ☐ Two B. ☐ Four C. ☐ Eight D. ☐ Twenty-four

4. The SSL Amiga/Transputer Board is so new that SSL haven't had time to think of a name for it yet! What would you call it?

____

Your name: ____________________

Your address: ____________________

__________ Postcode __________

I have read the rules and agree to abide by them

Your signature: __________ Date __________

Send your entry (photocopies permissible) to:
Solid State Leisure Transputer Competition, Amiga Computing,
Europa House, Adlington Park, Macclesfield SK7 4NP

GORDON HARWOOD



Bring you "Heroes in a Half Shell"™

Amiga POWERPLAY

Raphael's PACK 1

JUST ADD £30 TO PACKS 1, 2 OR 3 TO DOUBLE YOUR AVAILABLE MEMORY TO 1Mb. WITH OUR PRO-RAM PACK! (See page 4)



THAT'S RIGHT HARWOODS HAVE PUT TOGETHER THE ULTIMATE PACKS YET AGAIN STARTING WITH RAPHAEL'S AMIGA PACK 1 WITH 15 GREAT GAMES!

Just look at what you get...

- ☆ AMIGA A500 COMPUTER (See standard features list at bottom of this page)
- ☆ TEENAGE MUTANT HERO TURTLES
- ☆ SHADOW OF THE BEAST II
- ☆ DAYS OF THUNDER
- ☆ BACK TO THE FUTURE II
- ☆ NIGHT BREED
- ☆ MICROSWITCHED JOYSTICK
- ☆ TAILORED DUST COVER
- ☆ 10 BLANK 3.5" DISKS
- ☆ DISK STORAGE CASE
- ☆ MOUSE MAT

☆ PLUS 10 MORE GREAT GAMES...

- ☆ Datastorm
- ☆ Dungeon Quest
- ☆ E-Motion
- ☆ Grand Monster Slam
- ☆ RVF Honda
- ☆ Drivin Force
- ☆ Pipemania
- ☆ Rock 'N' Roll
- ☆ Skweek
- ☆ Tower of Babel

☆ AND...DELUXE PAINT II

...You won't need anything else for ages!



RAPHAEL'S PACK PRICED AT AN INCREDIBLE...

£399*

Amiga MONITORS

NEW PHILIPS CM8833/II



BRAND NEW PHILIPS CM 8833/II STEREO COLOUR MONITOR

Stereo High Resolution Colour Monitor

The ALL NEW Philips CM8833/II is the successor to the ever popular CM8833. This versatile multipurpose 14-inch monitor offers excellent colour graphics performance with a wide range of home and personal computers.

The CM8833/II can also be used as a TV Monitor when connected to either a VCR or TV tuner (available separately). Please ask for further details.

- ❑ RGB/AI, TTL, Comp. Video & stereo audio inputs
- ❑ Can also be used as a TV with tuner or VCR
- ❑ Features retractable foot ❑ Twin Speakers
- ❑ FREE lead for YOUR computer ❑ Earphone Jack Socket
- ❑ FREE 12 Month on site service warranty.

GREAT NEW PHILIPS MONITOR AT THE OLD PRICE OF ONLY...

£249*

COMMODORE 1084S STEREO COLOUR MONITOR

Commodore's Own Stereo High Resolution Colour Monitor

- ❑ RGB/AI/TTL, Comp. Video/Audio Inputs
- ❑ Can be used as TV with a tuner or VCR
- ❑ Twin Speakers for stereo output
- ❑ Supplied with cables for A500, CGA PC, C16-64-128

£259*

Amiga

Amiga

NOW WITH BRAND NEW FASTER STAR LC200 COLOUR PR...

Amiga 1Mb.

Amiga 1Mb.

NOW WITH BRAND NEW FASTER STAR LC200 COLOUR PR...

PRICED AT AN INCREDIBLE...

- Can be used as TV with a tuner or VCR
- Twin Speakers for stereo output
- Supplied with cables for A500, CGA PC, C16-64-128

£259*

Amiga POWERPLAY Leonardo's PACK 2

PACK 2 COMES TO YOU FROM LEONARDO AND INCLUDES THE FOLLOWING...

RAPHAEL'S BRILLIANT AMIGA PACK 1
The fantastic Amiga and ALL THE EXTRA'S detailed in Raphael's Powerplay Pack 1 above, AND then you also get...

THE ALL NEW PHILIPS CM8833/II STEREO COLOUR MONITOR
Twin Stereo Speakers, Green Screen Switch, Lead to Amiga, Free Tailored Dust Cover and 12 Months on-site warranty (See monitor panel for details)

A SPECIAL PACK FROM LEONARDO TO LET YOU SEE THOSE GAMES WITH SUPERB CLARITY AND IN FANTASTIC STEREO FOR ONLY...

£629*

Amiga POWERPLAY Donatello's PACK 3

NOW WITH BRAND NEW FASTER STAR LC200 COLOUR PRINTER AND NEW PHILIPS CM8833/II MONITOR

PACK 3 COMES TO YOU FROM DONATELLO AND INCLUDES THE FOLLOWING...

RAPHAEL'S BRILLIANT AMIGA PACK 1
The fantastic Amiga and ALL THE EXTRA'S detailed in Raphael's Powerplay Pack 1 above, and then you also get...

THE ALL NEW PHILIPS CM 8833/II STEREO COLOUR MONITOR
With FREE Dust Cover and Cable to your Amiga and including a 12 Months on-site warranty (See monitor panel for details)

AND

THE BRAND NEW STAR LC200 COLOUR PRINTER...
150/40 cps, Full Colour 9 Pin NLQ Dot Matrix Printer with FREE Dust Cover and cable to your Amiga (See printers on page 3 for further details)
(Or choose an alternative from our range & adjust by the difference in price)

A SPECIAL MONITOR AND PRINTER PACKAGE FROM DONATELLO TO SET YOU UP COMPLETELY AND ALL AT A PRICE THAT'S GOT REAL TURTLE POWER...

£829*

Amiga 1Mb. POWERPLAY Michaelangelo's PACK 4

PACK 4 COMES FROM MICHAELANGELO AND INCLUDES THE FOLLOWING...

A MORE SERIOUS PACKAGE ASSEMBLED BY MICHAELANGELO AND INCLUDING ALL THE FOLLOWING...

- AMIGA A500 COMPUTER WITH 1Mb.
- TEENAGE MUTANT HERO TURTLES
- PUBLISHERS CHOICE (DTP inc. Kindwords)
- MIDI-MASTER INTERFACE
- MR T's MIDI RECORDING STUDIO
- BBC BASIC EMULATOR
- MAXIPLAN 500 SPREADSHEET
- SUPERBASE PERSONAL DATABASE
- AMIGA LOGO ☆ F18 INTERCEPTOR
- FULLY MICROSWITCHED JOYSTICK
- TEN BLANK 3.5" DISKS & DISK WALLET
- DELUXE PAINT II, PLUS...TEN GREAT GAMES

Datastorm, Dungeon Quest, E-Motion, Grand Monster Slam, RVF Honda, Drivin Force, Pipemania, Rock 'N' Roll, Skweek, Towers of Babel,

BUILD YOUR OWN PACK... PACK 5-As above with CM8833 £799
PACK 6-As Pack 5 + LC200 Col. Printer £999
(Or choose an alternative from our range & adjust by the difference in price)

MICHAELANGELO'S SPECIAL PACK AT A SPECIAL PRICE OF JUST...

£579*

The above pack is also available with First Steps Software as an alternative for Primary School age children
PHONE NOW FOR FULL DETAILS!

Amiga 1Mb. POWERPRO Harwoods PACK 7

NOW WITH STAR BRAND NEW FASTER STAR LC200 COLOUR PRINTER AND NEW PHILIPS CM8833/II MONITOR

PACK 7 COMES TO YOU FROM HARWOODS AND INCLUDES THE FOLLOWING...

A PROFESSIONAL PACKAGE PUT TOGETHER FOR THE BUSINESS MINDED AMIGA USER

AMIGA A500 WITH 1Mb. MEMORY INC. CLOCK (See Standard Features List)
\+
NEW PHILIPS CM 8833/II STEREO COLOUR MONITOR
\+
NEW STAR LC200 9 PIN NLQ FULL COLOUR PRINTER
(Or choose an alternative from our range, and adjust by the difference in price)
\+ A HOST OF BUSINESS SOFTWARE & ACCESSORIES...

PEN PAL V1.3 (Word Processor)...1Mb.
SUPERBASE II PERSONAL (Database)
SUPERPLAN (Spreadsheet)...1Mb.

- TUTORIAL DISK
- DELUXE PAINT II
- DAYS OF THUNDER
- BACK TO THE FUTURE II
- SHADOW OF THE BEAST II
- NIGHT BREED
- MICROSWITCHED JOYSTICK
- 10 BLANK 3.5" DISKS
- DISK LIBRARY CASE
- MOUSE MAT
- 3 TAILORED AMIGA DUST COVERS

WE MEAN BUSINESS AT ONLY...

£899*

ALL OUR AMIGA's INCORPORATE... The following Standard Features

- 512K RAM
- 1Mb Disk Drive
- TV Modulator
- 4096 Colours
- Multi-Tasking
- Speech Synthesis
- Mouse
- 3 Operation Manuals
- Workbench 1.3 Disks
- Tutorial Disk
- Kickstart 1.3 Built-in
- All Connecting Cables

...AND ALL PRICES INCLUDE VAT AND STANDARD POSTAL DELIVERY SERVICE

IMPORTANT NOTICE 'TEENAGE MUTANT HERO TURTLES' ***IMPORTANT NOTICE***

Mirrorsoft's official UK Software Licence, 'Teenage Mutant Hero Turtles' is scheduled for release during Nov. '90. Orders despatched before this release will have the software forwarded the moment it is available.

'Teenage Mutant Hero Turtles' software title - UK Copyright of Mirrorsoft.

FINANCE FACILITIES

Finance with or without a deposit, can be tailored to suit your needs.
Gordon Harwood Computers offer facilities to purchase using our budget account scheme. APR 36.8% (Variable). Available to most adults of eighteen years or over, subject to status. Simply phone or write and we will send you written details along with an application form. Applications, required in advance, available to full time U.K. mainland residents and overseas British armed forces personnel.
Written quotations available on request. (Please refer to Page 3)

ORDER HOTLINE 0773 836781

Please see page 4 for our easy ordering procedures. Just compare the service we offer!

GORDON HARWOOD HARWOOD HARWOOD Computers
GORDON HARWOOD COMPUTERS
DEPARTMENT ACO/C3, NEW STREET
ALFRETON, DERBYSHIRE, DE5 7BP
TEL:0773 836781 FAX:0773 831040

FREE... Fully Tailored Dust Cover with all Dot Matrix Printers

PRINTERS



All printers in our range include the following features...

Standard Centronics parallel port unless otherwise stated for direct connection to Amiga, PC's, ST etc. and come with a... FREE CONNECTOR LEAD AND TAILORED DUST COVER!

When you are comparing our prices to others make sure that the same essential items are included eg. Printer Lead, Dust Cover, Postage and VAT etc.

All the characters Per Second speeds quoted below are Draft/LQ at 10cpi

NEW STAR LC 200 RANGE OF PRINTERS AVAILABLE NOW!
All the new printers in the LC200 range have the following features...

- 80 Column Dot Matrix
- Push and Pull Tractor Feeds
- Rear and Bottom Feeds
- Programmable from frontpanel, no dip switches
- Micro paper feed
- Reverse paper feed
- Paper park with Auto Single Sheet Paper Loading
- 12 Month Warranty

STAR LC200 GREAT NEW COLOUR PRINTER - 185/40 cps — £209.95
This is the one in our packs!

- 240 dpi - 9 Pin COLOUR
- Massive 16K Buffer
- 8 Resident Fonts
- Front Panel Pitch Selection
- Max. paper width 11.7"
- Supplied with colour & mono ribbons
- Faster than the old LC10 Colour but still at the same competitive price

STAR LC24-200 NEW 24 PIN MONO PRINTER - 220/55 cps — £259.95
New Star 24 pin that means business!

- 360 dpi - 24 Pin MONO
- 7K Buffer expandable to 39K
- 10 Resident Fonts
- Front Panel Pitch Selection
- Max. paper width 11.7"
- Supplied with mono ribbon
- Faster than the old LC24-10
- Extra font cartridges available

STAR LC24-200 NEW COLOUR PRINTER - 220/55 cps — £299.95
Colour version of the new LC24-200 Mono

- 360 dpi - 24 Pin COLOUR
- 30K Buffer expandable to 62K
- 10 Resident Fonts
- Front Panel Pitch Selection
- Max. paper width 11.7"
- Supplied with colour & mono ribbons
- Better quality than LC200 colour
- Extra font cartridges available

STAR LC10 - Up to 120/25 cps — £159.95
Our most popular Mono Dot-Matrix printer and at a super low price

- Multiple font options easily accessible from front panel
- Excellent paper handling facilities
- Simultaneous, continuous and single sheet stationery
- 240 x 240 dpi Graphics

STAR LC 24-10 - Up to 180/60 cps — £239.95
24 Pin version of the Star LC Series with

- Exceptional letter print quality
- 360 x 360 dpi Graphics
- Additional font cartridges available
- 8 resident fonts

STAR XB PRINTER RANGE Up to 240/80 cps - 24-10 COLOUR, OR 24-15 COLOUR — £479.95 24-10 Col. / £619.95 24-15 Col.
Two very fast LQ 24Pin Colour Printers
(15" Wide Carriage versions 41 exp. to 201K buffer)

- Exceptional print quality
- 4 x 48Pin super letter quality fonts
- 24 x 24Pin near letter quality fonts
- Huge 27K buffer expandable to 187K
- 360 x 360 dpi Colour Graphics
- 12mths on-site warranty (UK Mainland)

STARSCRIPT - 8ppm POSTSCRIPT LASER — £1995.00
Up to the minute technology Laser Printer

- 300 DPI, 2Mb. Upgradable to 5Mb.
- Emulations inc: HP Series II, Epson EX800, IBM Proprinter & Diablo 630
- Serial/Parallel printer interface built-in
- Inc. 12mth on site warranty (UK Mainland)
- Every desktop publishers dream

HEWLET PACKARD PAINTJET A4 — £899.00
Best quality full colour printer at a realistic price

- Parallel, Centronics or Serial RS232 I/F (please specify with order)
- For presentation graphics, CAD and technical/scientific applications
- Full page colour of graphics on paper in 4 minutes (typical)

- Push and pull tractor built-in with bottom
- 360 x 360 dpi Colour Graphics

AMIGA GRAPHICS AND SOUND



NEW DISNEY ANIMATION STUDIO SOFTWARE — £99.95
LATEST PAL VERSION
Full featured state of the art animation program. Gives you the ability to create full length Disney style animated sequences (1 Mb recommended).

MASTERSOUND — £33.95
High quality 'Mono' Sampler. Mono samples are better than stereo when sampling instruments for your own music with soundtracker etc.

AMAS — £74.95
Combined stereo sampler and midi interface. Samples in Mono or Stereo.

MIDI INTERFACE (5 PORT) — £24.95
In, Out, Through + 2 Switchable Through/Out inc Cable

MUSIC 'X' - Sequencing Software, Full Edition — New Low Price! £59.95
LATEST VERSION 1.1

AUDIOMASTER II — £64.95
High quality sampling software, The Professionals Choice

DIGIVIEW GOLD V.4 (Inc Cable & Digipaint I) — New Low Price! £99.95
Digitises static images in black & white or FULL COLOUR (Using filters provided). All resolutions supported (memory permitting). Creates IFF & HAM files. Uses B&W (or colour with B&W Mode) video cameras

VIDI with Vidichrome B/W Grabber colour digitiser — £99.95
Grabs black & white frames (in grey scales). 5-6 frames per second. Will store as many frames as you have RAM (16-20 on 1Mb, 60 with 3 Mb) Inc. FREE Vidichrome colour digitising s/ware (worth £19.95) & cables

COLORPIC...The best colour grabber by far! — £439.95
Instant colour frame grabbing from moving video. Capture superb digitised video images in a range of resolutions from standard composite video source eg domestic TV video rec. or camera in a 50th of a second.

RENDALE 8802 Including Cables & Deluxe Video Animation Software — £189.95
Home/Semi Pro standard, allows computer display to be mixed with any incoming composite video signal.

PODSCAT 12" x 12" Graphics Tablet complete — £219.95
Supplied with driver software, it replaces your mouse and thus works with ALL applications software. Also available for IBM PC & Compatibles

ACCESSORIES



3.5" DISK HEAD CLEANER — £2.99
Essential maintenance for your disk drive. Keep clean and trouble free.

DISK STORAGE BOXES

40 Piece	Only £5.95
80 Piece	Only £7.95
100 Piece	Only £8.95
Banx 100 Piece drawer type stackable	Only £11.95
Posso 150 Piece drawer type stackable	Only £17.95
10 Genuine Commodore 3.5" branded	Only £9.95
10 Unbranded 3.5" certified	Only £6.95

ORDERING MADE EASY

Before you choose from whom to purchase, please give us a call. We are always more than happy to discuss your requirements, and answer any queries you may have...

ORDER BY PHONE: Phone our Order Hotline with your Access, Visa, Mastercard or Lombard Credit Charge Card quoting number & expiry date.

ORDER BY POST: Make cheques, bankers building society drafts or postal orders payable to GORDON HARWOOD COMPUTERS. (Personal or business cheques take 7days to clear from day of receipt whereupon your order will be despatched)
Please send Name, Address, and most importantly if possible, a Daytime Telephone Number along with your order requirements. Please check you are ordering from one of our latest advertisements before posting (phone if you require confirmation). Please remember that for example many September publications appear during August, therefore prices you see may have changed (either up or down).

FREE POSTAL DELIVERY: Goods in UK Mainland (5-7 day delivery).
OR **COURIER SERVICE** ...Add £5 per major item for next working day delivery, UK Mainland most regions.
(Goods normally despatched on day of ordering or payment clearance)

EXPORT ORDERS: Most items are available at TAX FREE PRICES to non UK residents when visiting us or for export shipment. Please contact us for ordering information.

REMEMBER AFTER YOU'VE BOUGHT FROM HARWOODS, WE'LL STILL BE HERE...

TECHNICAL SUPPORT: You will be given our Exclusive Technical Support Phone Number to call should you require any help or advice on any aspect of the system you have purchased.

12 MONTH WARRANTY: Items proving faulty within 30 days of purchase are replaced with NEW UNITS unless otherwise stated. For the whole guarantee period, warranty service will be completely FREE OF CHARGE and a FAST turnaround is GUARANTEED by our OWN ENGINEERS!

COLLECTION FACILITY: Any computer, monitor or printer requiring warranty service can be collected from your home FREE OF CHARGE during the guarantee period (UK Mainland only)

FULL TESTING PROCEDURE: All computers are tested prior to despatch, and all items are supplied with mains plug and leads as required - just connect up and use straight away.

REMEMBER WE'RE NOT JUST ANOTHER MAIL ORDER COMPANY...

All listed prices are what YOU PAY, and there are NO HIDDEN EXTRAS. VAT and postage are included, and prices are correct at time of going to press (Pack details may vary from time to time). Offers are subject to availability and to being the latest advertised packs and prices. Our offers are NOT supplied on a trial basis. E&OE

FINANCE FACILITIES

Finance with or without a deposit, can be tailored to suit your needs.

Gordon Harwood Computers offer facilities to purchase using our budget account scheme. APR 36.8% (Variable). Available to most adults of eighteen years or over, subject to status. Simply phone or write and we will send you written details along with an application form. Applications, required in advance, available to full time U.K. mainland residents and overseas British forces personnel. Showroom visitors, please ask for details of our in-store "Instant Account". Written quotations on request.

If you are already the holder of a Lombard Credit Charge Card you can use this to purchase from us (subject to your personal card limit)

VISIT OUR NEW SHOWROOM

Please pay us a visit where our full range of advertised products, AND MORE, is on sale. 'ALL UNDER ONE ROOF', in the pleasant surroundings of our new purpose fitted showroom. There's plenty of parking close by.

A61 Chesterfield

Best quality full colour printer at a realistic price £899.00

- Parallel, Centronics or Serial RS232 I/F (please specify with order)
- For presentation graphics, CAD and technical/scientific applications
- Full page colour of graphics on paper in 4 minutes (typical)
- Non impact printing, virtually silent, 43dba
- Will print transparencies
- 12 Months on-site warranty (UK Mainland)

24 Pin Colour Printer
- Push and pull tractor built-in with bottom feed for labels & multi-part stationery
- 360 x 360 dpi Colour Graphics
- 2 Year Citizen warranty

CITIZEN SWIFT 9PIN COLOUR - Up to 160/40cps — *New Low Price!* £229.95

New super high spec 9Pin colour printer
- 8K Buffer 4 Fonts
- Push and pull tractor built-in
- Feed for labels/multi part stationery
- 240 x 240 dpi Colour Graphics
- Best text quality in our 9Pin range
- 2 Year Citizen warranty

CITIZEN 120D+ - Up to 120/25 cps — £149.95

Very reliable low cost printer (please specify interface on order)
- Interchangeable interfaces for Centronics RS 232 or Serial type for CBM 64 etc
- Full 2 Year manufacturers warranty

We are proud to announce that Star have appointed Gordon Harwood Computers as both a Star Corporate Preferred Reseller and Star Gold Dealer in recognition of our commitment to their products and the levels of service and support we provide...

MAKE HARWOODS YOUR FIRST CHOICE FOR STAR PRINTERS

RIBBONS

Genuine... PRINTER RIBBONS	SINGLE	6 PACK
LC10 MkII BLACK	£4.95	£24.95
STAR LC10 COLOUR	£6.90	£34.95
STAR LC24-10, XB24-10 & XB24-15 BLACK	£6.90	£34.95
STAR XB24-10 & XB24-15 COLOUR	£14.95	£74.95
STAR LC15, FR10 & FR15 BLACK	£7.49	£39.95
CITIZEN 120D/180E/LSP10 & CBM MPS 1200/1250 BLACK	£4.95	£26.95
CITIZEN SWIFT 9 BLACK	£4.95	£26.95
CITIZEN SWIFT 24 BLACK		
COMMODORE MPS 1230 & OLIVETTI DM 100 BLACK	£6.95	£39.95
COMMODORE MPS 1500/1550 & OLIVETTI DM 105 COLOUR	£12.95	£69.95

40 Piece	Only £5.95
80 Piece	Only £7.95
100 Piece	Only £8.95
Banx 100 Piece drawer type stackable	Only £11.95
Posso 150 Piece drawer type stackable	Only £17.95

10 Genuine Commodore 3.5" branded	Only £9.95
10 Unbranded 3.5" certified	Only £6.95
10 Unbranded with library case 3.5" certified	Only £7.95
80 Unbranded 3.5" certified	Only £39.95
80 Unbranded with lockable storage case 3.5" certified	Only £44.95
100 Unbranded 3.5" certified	Only £44.95

MICROSWITCHED JOYSTICKS

Competition Pro Mean Green	Only £14.95
Zipstick (autofire)...The Best!	Only £15.95
NAKSHA MICROSWITCHED MOUSE-Amiga/ST Amstrad PC	Only £29.45
GOLDEN IMAGE OPTICAL MOUSE-Amiga	Only £39.95
MODE SWITCHBOX-For rendale 8802	Only £34.95

BOOKS For beginners and Experts alike!

AMIGA FOR BEGINNERS - VOL. 1 ABACUS BOOKS, From unpacking your Amiga to creating your own icons, includes first use of basic and extras disk	£12.95
AMIGA BASIC INSIDE AND OUT - VOL 2 ABACUS BOOKS, The definitive step by step guide to programming your Amiga in basic.	£18.95
AMIGA MACHINE LANGUAGE - VOL 4 ABACUS BOOKS, Practical guide to learning 6800 assembler language on the Amiga	£14.95
AMIGA DOS INSIDE AND OUT - VOL 8 ABACUS BOOKS, The complete guide to Amiga DOS and the CLI.	£18.45
AMIGA PROGRAMMERS HANDBOOK II - SYBEX, In depth reference to device I/O programming for the Amiga series of computers.	£23.95
AMIGA HARDWARE REFERENCE MANUAL - ADDISON WESLEY, written by the technical experts at Commodore Amiga Inc, USA....The people who designed your Amiga. Hardware level machine code prog. at advanced level.	£21.95

EDUCATIONAL SOFTWARE For most age groups!

PLAY AND READ - Ages 4 to 9, The complete reading tutor. Part 2 teaches spelling to the beginnerat reading.	£18.95
UNCLE D's CON-SOUND-TRATION - Ages 4 and up, Three graphical concentration games, 4 skill levels each.	£34.95
DINOSAUR DISCOVERY KIT - Ages 3 to 8, Zug the talking Megasaur helps children build early reading skills.	£23.95
THE THREE BEARS - Ages 5 to 10, Develops imaginative thought/reading skills.	£22.95
SPELL BOOK - Ages 4 to 6, Developed with the help of a Primary School Head Teacher to aid spelling skills.	£17.95
PRIMARY MATHS COURSE - Ages 3 to 12, Complete 24 Programme Course.	£21.95
MATH BLASTER PLUS - Ages 6 to 12, Maths fundamentals, teacher designed.	£21.95
BETTER MATHS - Ages 12 to 16, Higher level to Linear/Quadratic Equations.	£21.95

Shown above is ONLY a selection of books and software...phone for details of lots more!

Please pay us a visit where our full range of advertised products, AND MORE, is on sale. 'ALL UNDER ONE ROOF', in the pleasant surroundings of our new purpose fitted showroom. There's plenty of parking close by.



Come and see for yourself amazing Amigas and a whole host of peripherals, along with our vast range of software & accessories. Our helpful team are always on hand. We look forward to welcoming you.

Amiga STORAGE

COMMODORE A590 20Mb HARD DISK DRIVE WITH 0.5 Mb. MEMORY FITTED FREE! — *New Lower Price...* £299

Commodore's own hard drive for the A500
- Autoboot with Kickstart 1.3
- Sockets for up to 2Mb RAM expansion
- DMA access
- External SCSI port
- Complete with 0.5 Mb. Memory FREE!

COMMODORE A590 20Mb HARD DISK DRIVE BUT UPGRADED TO A FULL1Mb. — £319

As above but with a total of 1Mb memory!

COMMODORE A590 20Mb HARD DISK DRIVE BUT UPGRADED TO A TOTAL OF 2Mb. — £349

As above but with a 2Mb memory!

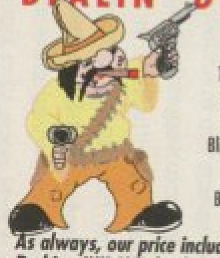
EXTERNAL FLOPPY DISK DRIVES with the following features...
- Disable switch
- Throughport
- Access light
- For A500/1000/2000/3000

CUMANA CAX 354 3.5" SECOND DRIVE — £74.95

HARWOODS SUPERSLIM 3.5" SECOND DRIVE — £59.95
- With EXTRA Long Cable

PRO-RAM PACK

DEALIN' DIEGO'S DYNAMITE DEAL!



512K MEMORY EXPANSION

16 Chip, not 4 (extremely important), same configuration as Commodore A501 for guaranteed full compatibility with latest version 8372A Amiga 1Mb Blitter.

Can be used as fast MEM with all A500's, or chip RAM when used with 8372A Blitter (phone for details as this may require circuit board mods depending on age of your Amiga)

British Made with Enable/Disable Switch and Auto recharge battery backed real time clock.

As always, our price includes VAT, Postage and Packing (UK Mainland)! All this for the incredible introductory Dealin' Diego Price of only... £32.95

A special deal to celebrate our NEW SHOWROOM

GORDON HARWOOD HARWOOD HARWOOD *Computers*

ORDER HOTLINE

0773 836781

GORDON HARWOOD COMPUTERS
DEPARTMENT ACO/C3, NEW STREET
ALFRETON, DERBYSHIRE, DE5 7BP
TEL:0773 836781 FAX:0773 831040

Hype and hyperbolics

Duncan Evans tells us an audio virtual imagery object (story), about Viva

It was in 1987 that I first wondered what possible use you could have for an advanced authoring system for interactive video. Microdeal had driven up from Cornwall to show me an ST controlling a videodisc player, in which sat the original arcade videodisc of Dragons Lair.

"Oh yes", exuded the spokesman, (there will be cheap videodisc players on the market by Christmas, and you can buy the controlling software and Dragons Lair disc from us for only £100".

Three years later and videodisc players have flopped. In this country. Apparently there are sufficient machines in the US to make it worth Michtron's while to release Viva there. In those three years the scope of Viva has changed quite dramatically, yet at heart it remains a videodisc player-based system.

Applications range from training, sales promotion, simulations and games, and as a general information distribution system. It contains functions for controlling such external hardware as videodisc players and video recorders (including genlock), as well as multi-tasking and providing links to word processors, databases, drawing packages, animation packages (or combinations like DPIII), video digitisers and sound samplers. Of course to do that you need quite a lot of ram, and indeed, that is just what Viva expects you to have.

To use the package properly you are advised to have a bare minimum of 1.5 Mb, 2 Mb to do anything useful, and 3 Mb to do anything special. A hard drive also comes in handy since Viva stories with extensive use of sound and graphics gobble up disk space.

That's just to start developing. To generate your graphics and sound you're going to some of that hardware and software I listed earlier. Be aware that though you can produce standalone applications, the user will invariably need at least 1 Mb of ram and two disc drives to be able to use it.

The basic concept of Viva is that of taking graphic screens and sound effects, stringing them together, and by use of text and control commands offering the user a series o options, finally presenting information based on the user's reactions.

If you have a videodisc player connected then obviously you have access to large amounts of graphics and sound data. You could, for example, take that



The effects panel with sources

Dragons Lair disc and demand totally different solutions to the problems within the limitations of the graphics at your disposal.

The trouble is that in the UK there aren't an awful lot of videodiscs for you to use. The manual does help out a little here as it lists both manufacturers of videodisc players and suppliers of videodiscs. In America.

Spinning a yarn

Actually programming a simple Viva story couldn't be easier, as all the commands come in the form of icons. It is simply a matter of stringing them together on the main screen, complete with branches and loops where necessary, to organise an interactive story and its special effects.

Unfortunately the function of only a few of the rather garish icons is intuitive, so careful study of the manual is necessary. To make assimilation easier the icon commands are organised into function groups thus: Interactive (hot spots, questions, timers), video (laserdisc commands which are very easy to use), Events (branching and labelling), Audio (sampled sound and music commands), Graphical (covering .IFF images and the various special effects), Text, (display, printing and sending text to the Amigas speech synthesiser), Mathematics (operations on variables – useful especially for simulations and games), and System (access to computer system functions and other Viva stories).

While organising a short story is easy enough, for anything interactive or slightly more complex a great deal more consideration needs to be shown.

Most programmers I know don't use flow charts, just lots of paper. For a moderate size Viva production I'm afraid that flow-charting of some sort needs to be done before starting. While you can delete and insert icons at will, if you don't have a clear idea of what you are doing when you start,the story may work but it will do so in a haphazard fashion.

A Viva work screen has pull down menus along the top; an info bar which constantly tells you how much memory you have left and the number of icons used, a storyboard on which the icons are arranged, and at the bottom a list of all the icons in whichever function group happens to be open.

Going back up to the pull down menus, these cover mundane functions such as disc access, running the program, executing a wordprocessor, animation package, art package, sound sampler, video digitiser and database. Now you see one of the reasons why you need so much memory.

Viva offers none of these extras, you need to create everything used in Viva from some other source. There is the facility to create some text from within Viva though, but this is only a couple of words that can be overlaid on a graphics screen. For anything more you do need that wordprocessor. Considering how easy it would have been to include a rudimentary text processor and art package this is a little niggardly.

Also on this top bar are the defaults which cover where the program expects to see its data coming from. These are set to DF0: initially, and can cause trouble when you load in a storyboard from say, DF1:. It loads in all right, but when you try to run the story the program reports a File not found error, simply because it is looking at the wrong drive for its data.

Initially an icon representing each of the function groups is presented along the bottom of the screen, being replaced by the actual commands when you click on one. The most commonly used function group will be Graphics, so lets have a look at what you can do.

LOADPIC and SHOWPIC are fairly obvious in their functions, but SHOWPIC can also be used to simply clear the screen by assigning the screen colour zero as an argument. The special effects that can be performed on your newly-loaded picture include a checkerboard effect (spiralling in or out), pushing the old picture off with a new one, fading to black, revealing a picture as if it were painted on vertical blinds, slowly rotating until the full picture was shown, that old standby the dissolve, and a four directional wipe which rolls a new picture over the existing one.

An interesting feature is that if you have genlock and superimpose a computer picture completely over the top of a video picture, then using a fade, dissolve, checkerboard or push command with colour zero as an argument would reveal the underlying video in a fairly impressive manner.

Error in the system

One dreadful feature of Viva are the error messages. Unfortunately an otherwise helpful manual has neglected to list and explain them. Thus: Screen size not equal to page size, which is what happens when you try to load a 320 x 256 res picture, could be taken to mean a variety of things: The screen you are loading, the screen size of the Viva environment, or the screen size of a screen you defined with NEWSCREEN at the start of your Viva story ?

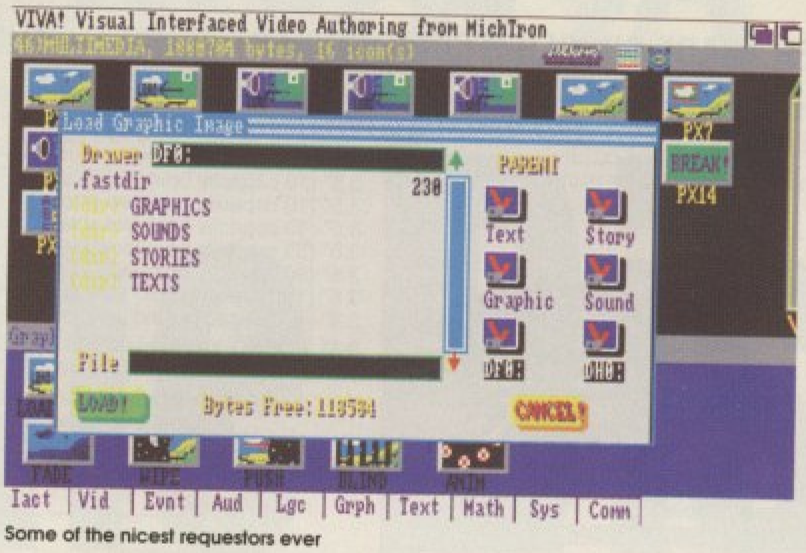
This tends to happen a lot with other aspects of Viva, making it easy to program, but hellishly difficult to sort out just why things aren't happening in the way you think they should. Going back to the NEWSCREEN command, the manual states that this is primarily used so that the SPEECH command can be used effectively. Setting up a screen with less than eight colours is required for decent speech.

The odd thing is that the standard Viva screen is of course 320 x 200 (as it is American). The manual recommends this and 640 x 200 or 400 as your standard resolutions. Unfortunately the NEWSCREEN command only lets you set up a screen in variations of 320 and 640 horizontally by 256 and 512 vertically, or the English standards.

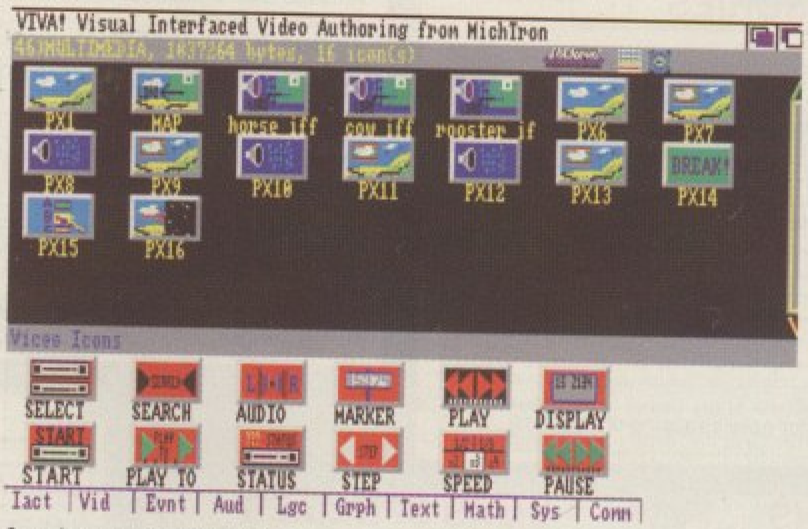
Anyway, as soon as you have decided to load and play around with a picture, the appropriate icons appear on the main storyboard. Clicking on the icon reveals a further level of interaction. You can move, edit, delete, insert, copy or test the icon.

On the special effects icons,there is a speed of completion setting which you can experiment with by repeated testings, until it meets your requirements.

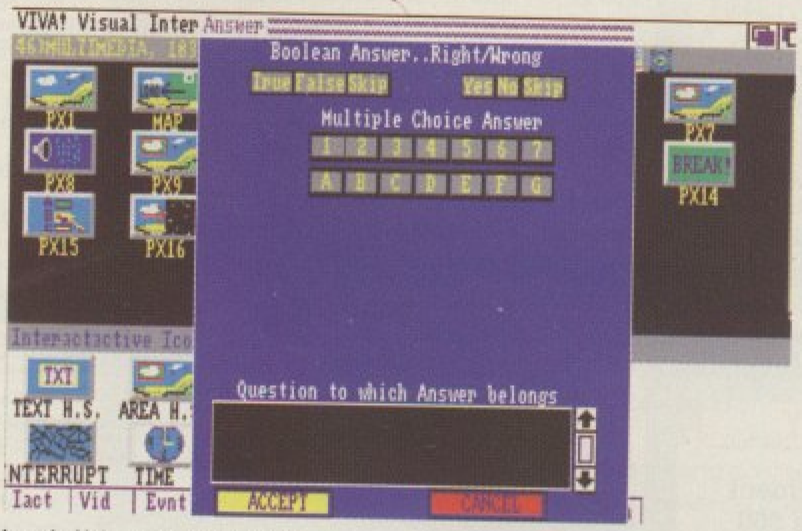
In the spirit of real programming, the Events functions allow you to use labels in order to implement If-Else, Do-Until, While, Goto, Masterloop, Return, and Break commands. The philosophy here being that it may be a collection of pretty icons, but it should still be structured properly.



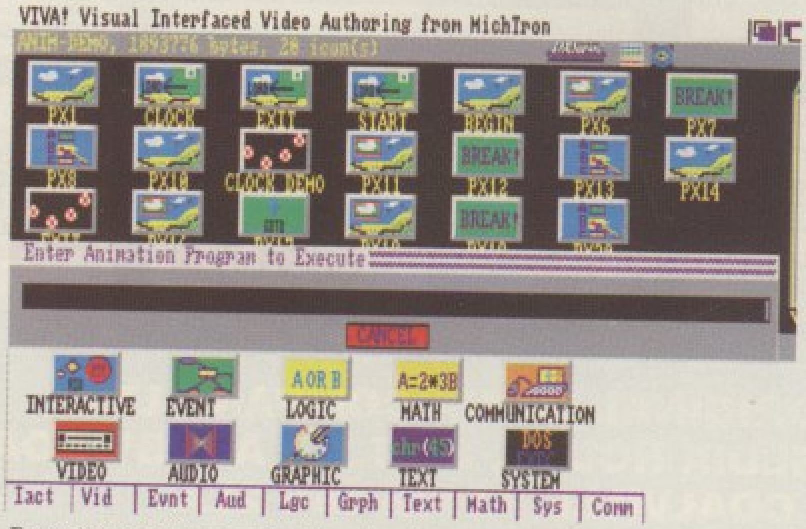
Some of the nicest requestors ever



Sounds are well catered for



A spot of interaction is called for



The main panel allowing entry to the subsystems

The other function groups offer scrolling text, a number of different fonts, mathematics so that interactive applications can be developed – logical operators, variables, constants, Inc, Dec and the usual maths operators – the playing of sampled sounds, various interrupts, hot spots, keyboard scans and timers, configuration of the serial port, as well as reading and writing to it and, of course, control of a videodisc player. The commands for this are as easy as using a VCR at home.

A typical Viva application rather resembles a Hypercard application on the Mac, as a series of connected screens with audio effects containing information are presented in accordance to the user's responses and interaction.

Simple simulations and educational material can be produced with a lot of effort. At this point you'll be looking to the printer option which will list out the functions of the icons and what they are operating on.

I have to say that if all you are going to do is produce material which strings together graphic screens and sounds together in this way then perhaps you'd be better off with a copy of AMOS, as it is far more powerful, but then obviously it is harder to use.

Deluxe Video is the other alternative which springs to mind if you take up the option of using genlock to mix computer and video signals, though you can produce a more interactive production with Viva than you can with Deluxe Video. Where Viva really shines is when you get hold of a videodisc player and videodiscs, mix in some computer graphics,and really dazzle the audience.

Viva really works on three levels, and only on the last one does it excel. On the other two there are alternatives on the market which are both harder and easier to use.

Whether the program's memory and hardware requirements are worth meeting just so you can use the package is dependant on the application you have in mind. Though it can certainly produce good results, sometimes very quickly and easily, Viva can also be very fiddly, at times unhelpful, and simply not have the scope to do what you want it to do.

Viva
Microdeal
0726 68020
£99.95

DEAL DIRECT DEAL DIRECT

SAME DAY DESPATCH

AT LAST!!

ALL PRICES INC V.A.T.

A PREMIER TRADE SUPPLIER COMES DIRECT TO YOU – THE PUBLIC!

3.5" DISKS

Large or small users – we have the prices for you!

SONY D/S D/D 135 tpi

50's	42p each	£21.00
100's	41p each	£41.00
400's	39p each	£156.00
800's	36p each	£288.00
1200's	35p each	£420.00

MITSUBISHI

50's	39p each	£19.50
100's	38p each	£38.00
400's	35p each	£140.00
800's	32p each	£256.00
1200's	30p each	£360.00

All disks are PIN numbered and carry a 100% quality control/no quibble guarantee. Disk labels supplied

3.5" DISKS FROM 30p inc VAT

STORAGE BOXES

3.5" (10 capacity box) "Slimpak"	£0.95 each
3.5" (10 capacity box) see through "Vision 10"	£1.00 each
3.5" (40 capacity box) lockable disk storage box	£3.50 each
3.5" (50 capacity box) lockable disk storage box	£3.95 each
3.5" (80 capacity box) lockable disk storage box	£4.30 each
3.5" (100 capacity box) lockable disk storage box	£4.95 each
3.5" (120 capacity box) lockable disk storage box	£6.50 each
3.5" 'POSSO' stackable box (holds 150)	£15.95
3.5" 'BANX' lockable/stackable (holds 90)	£9.95

All disk boxes are anti-static, Amiga beige, contain keys, dividers and rubber feet (with the exception of 10's)

ACCESSORIES

Printer Stands (80 col)	£6.50
Printer Stand with tray	£9.95
Tilt 'n' turn monitor stands for Amiga	£9.95
Monitor Arms (fully adjustable with keyboard keeper)	£69.95
Data Switches (2-way serial or parallel)	£12.95
Copy Holders (Thingi III)	£3.95
A4 Desk Top Holder	£7.90
Mousemats (boxed 8mm) red, blue, grey	£2.95
Mousemats 5mm packaged	£1.95
Mousebrackets	£1.95
Amiga printer leads	£5.95
3.5" cleaning kits	£1.95
Amiga Dust Covers	£2.95
Amiga Screen Filters	£12.95
Roll of 1000 3.5" labels	£7.50
1000 Tractor feed labels	£9.95
Fastrack II (attaches to side of monitor for easy swapping of diskettes)	£2.95
Keyboard Cleaner	£2.95

PRINTER RIBBONS

	QTY1	QTY5	QTY10
Amstrad DMF 2000/3000	£2.90	£2.60	£2.20
Amstrad DMF 4000	£3.90	£3.60	£3.20
Amstrad PCW 8256/8512	£3.50	£3.20	£3.00
Amstrad PCW 9512	£2.90	£2.60	£2.20
Brother HR15/20/25/35	£2.50	£2.30	£2.15
Brother M1009/1109	£3.90	£3.60	£3.20
Citizen 1200/LSP10	£2.90	£2.70	£2.40
Epson MX/FX80/85/800	£2.90	£2.70	£2.40
Epson FX100/105/1000	£3.60	£3.40	£3.10
Epson LX80/86	£2.90	£2.70	£2.30
Panasonic KXP 1080/81/82	£3.90	£3.70	£3.20
Star LC10	£2.90	£2.70	£2.40
Star LC10 4 colour	£5.90	£5.30	£5.00

PLEASE NOTE THAT THIS IS JUST A SMALL SELECTION OF OUR LARGE RANGE. TELEPHONE 0530-813591 FOR PRICING ON OTHER RIBBONS NOT LISTED

AMIGA

OMC AMIGA STARTER PACK

COMPRISES:
- 500 Flight of Fantasy/Batman
- 1/2 meg additional RAM upgrade
- 3.5" external disk drive
- 10 3.5" D/S D/D 135 tpi diskettes
- 1 (40 cap) lockable storage box
- 1 mousemat
- 1 mouse
- 1 mouse bracket
- 1 joystick
- 1 Amiga dustcover

PLUS the usual 4 great software titles

NO NEED TO SHOP AROUND

R.R.P. £679

OMC All inclusive price of £489.00 inc. VAT

A saving of £190.00

PHONE FOR DETAILS ON CLASS OF 90's PACK

RAM EXPANSIONS

1/2 meg upgrade (without clock) £34.95

1/2 meg upgrade (with clock) £39.95

Features include: ON/Off memory switch, auto-recharge battery backed clock, 4 low power fastrams.

4 MEG RAM EXPANSION (POPULATED)
Gives a total memory of 4.5 Mb
1 year warranty. No cables, soldering etc.
Compatible with Fat or Fatter Agnes, fits in A501 slot.
100% compatible with all Amiga software

ONLY £299.95

XMAS SPECIALS

Star LC10 Printer	£159.95
Star LC10 Colour Printer	£199.95

Listing Paper
11" x 9.5" S.P. Plain 70 GSM Micro Perf.

Pack of 100	£2.50
Pack of 250	£3.95
Pack of 500	£5.95
Pack of 1000	£8.95
Pack of 2000	£16.95

DISK DRIVES

3.5" External disk drive for Amiga, Slimline design colour co-ordinated throughport connector.
1 year guarantee

ONLY £59.95

SOUNDBLASTER

Turns your Amiga into a powerful sound emitting system, pack includes:

- 50 watt 3-way speakers
- 3" woofer
- 2" mid range 1" tweeter
- power supply
- cables
- full instructions

Free stereo headphones

£44.99 inc VAT

POWER SUPPLY

Fully compatible replacement Power Supply for Amiga 500

ONLY £38.95

MICE

Amiga mouse, two button fully compatible as replacement	£19.95
Atari ST mouse, two button fully compatible replacement	£19.95
Nakshua	£39.00
IBM cordless	£49.95

"OMC MOUSE DEAL" Replacement mouse + mouse bracket + mousemat ONLY £22.95

JOYSTICKS

Cheetah 125	£7.95
Quickshot III Turbo	£9.95
Konix Speedking	£11.95
Pro 5000	£13.95
Competition Pro (auto fire)	£14.95

TO ORDER

CHEQUES AND P.O.'S PAYABLE TO OMC LTD AND SEND TO ADDRESS BELOW
CREDIT CARDS SIMPLY TELEPHONE YOUR ORDER ON 0530 813591 (8 LINES)
FAX 0530 813595 FOR OUR IMMEDIATE ATTENTION

VISA

THE ORIGINAL MEDIA COMPANY LTD
DEPT AC, MEDIA HOUSE, UNIT 14, ASHBY ROAD,
COALVILLE, LEICS LE6 2LA
TEL: 0530 813591 FAX: 0530 813595

Trade a/cs welcome. All prices include VAT. Corporate, education orders welcome. Personal callers welcome

O.M.C. Ltd

POSTAGE: £3.50
CARRIAGE: £8.50

DEAL DIRECT DEAL DIRECT

AMIGA COMPUTING

The Disk

Now, from the people that brought you Pagesetter II, Protext, Cave runner and SID... comes the latest thrilling installment of the world's most rigid floppy. Prepare yourself for The Disk...

Why slomo when you can flymo? Get some intermodulated turbo injection into DF0:

FlashDisk!

FLASHDISK! is a shareware floppy disk optimiser for all models of the Amiga computer, including the Amiga 3000. It is not a cache – it merely reorganises the information on the disk to make directories and loading more efficient.

The changes are permanent and will usually increase the loading speed of directories between three and five times, the increase depending on how badly the original disk was fragmented. In addition, loading time of large programs is often reduced. The resulting disk is still an AmigaDos disk and is 100 per cent compatible.

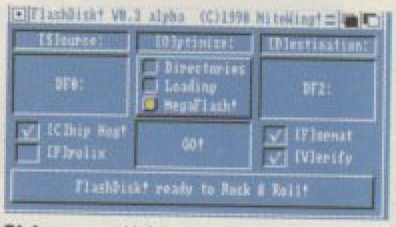
FlashDisk! v0.3 does not work on hard disks. It will however work with any floppy trackdisk compatible device that is in the slots DF0: to DF3:. When doing a two drive flash the source and destination *must* be of the same format – basically the same restriction that Diskcopy poses on a two drive copy. This will change – remember v0.3 is an *alpha* release.

FlashDisk! will not work on copy protected disks. It will also fail if the source disk is corrupt. In this case, run DiskDoctor or DiskSalv on the source disk and try again.

You may also notice that FlashDisk! can be very picky about minor errors that it encounters. The author says this will change. For now, the disks must be without defects.

Run FlashDisk! from the Workbench or the CLI. There are currently no command line options (there will be). So to use FlashDisk! put the program into a directory accessible by your path and run it as you would any other program or tool. CLI users may find it easier to rename FlashDisk! to FD.

Once FlashDisk! is running, select



This month's cover disk was optimised using FlashDisk!'s MegaFlash! option.

the source and destination disks by clicking on the big gadgets beneath the Source: and Destination: headers. Select the optimisation method: Directories, Loading, or MegaFlash! Select any other options: Chip Hog!, Prolix, Format, and Verify.

Once you have chosen the options that you desire, make sure the disks are in the correct drives and select GO!.

You may stop FlashDisk! at any time by pressing the STOP! gadget,

CHIP HOG!: This option, when enabled, tells FlashDisk! that it may use as much memory as it wants. For speed reasons this is mostly chip memory – the more memory, the faster FlashDisk! works.

It is not advisable to use this option if you plan on using another program at the same time, it just makes things go a lot faster.

When Chip Hog! is disabled FlashDisk! will use as little memory as it can (50k to100k). This slows FlashDisk! considerably but makes running other programs at the same time less dangerous. You may turn this option on and off at any time. For kicks, run a memory watch program and toggle this option.

Also note that in low memory conditions and when the Chip Hog! option is turned off, FlashDisk! will sometimes have to search all over the source disk for information. This can make the drive sound like it is falling apart, like Workbench does to badly fragmented disks. This is normal, there is no need to worry. When FlashDisk! is done, the final disk will work much smoother in all environments.

PROLIX: When enabled, this tells FlashDisk! to print meaningless information on the screen. Mostly it is used to verify that the program is in fact working – a heart beat. Prolix may be turned on and off at any time. FlashDisk! works a little bit faster when this option is disabled.

FORMAT: When enabled, this tells FlashDisk! to format the destination disk as it goes. You *must* have this option enabled if you are flashing to a new disk. It is a good idea to always have Format enabled. However, if the destination was previously formatted successfully as an AmigaDos disk with no errors, this option is optional.

The flashing process is noticeably faster when disabled. This option may also be turned on and off at any time. The author may change this because he feels it is potentially dangerous to the novice user. Should he keep this feature? Write and tell him.

VERIFY: This option, when enabled, tells FlashDisk! to verify the destination with the source. It may also be turned on and off at any time.

If a verify error occurs FlashDisk! will report the error and continue. At the end, the number of verify errors encountered will be displayed. If there were any errors, the odds are that the destination disk will not be useable. Try it again.

hitting Ctrl-C, sending a Break to its process, selecting the close gadget of the window, or pressing the Escape key. At times, there is a brief pause before terminating, but nothing unreasonable – it depends on what FlashDisk! is doing at the time you try to stop it.

If FlashDisk! is flashing a disk, the first Ctrl-C, Escape, or close window event is regarded as an abort. A second will close FlashDisk! down.

Optimisation methods

Directories: Makes the directories as fast as possible, which includes placing the *.info files in the best location for Workbench users. This option is good for both CLI and Workbench users.

Note: After optimising, leave the write protect tab off and let Workbench validate the disk. Although not necessary, Workbench works smoother if it can validate the disk.

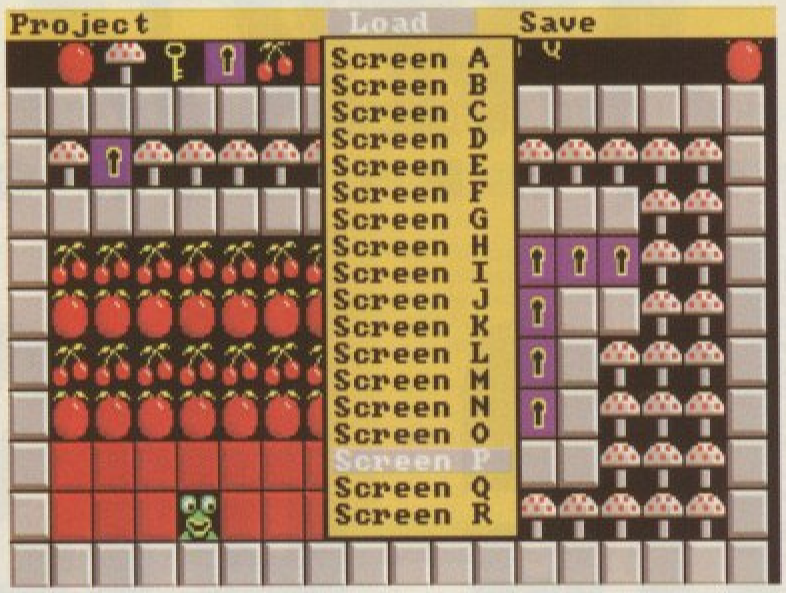
Loading: Makes every attempt to put large files in as contiguous an order possible. It also tries to optimise directories and is a good option for big programs.

Megaflash: Does anything and everything to optimise the performance of the disk. At this time it only does a few more things than the Loading option.

Copyright

FLASHDISK! v0.3 alpha is shareware, Copyright © 1990 NiteWing!. Any donations would be more than appreciated (any amount). For various reasons the author cannot offer upgrades or any other Registered User policies. He will, however, send an availability notice to all who send a donation.

Send donations and comments to: *Curtis J. Palmer, c/o NiteWing!, 840 Wallowa Drive, Walla Walla, WA 99362.*



Any of Gribit's 18 screens can be loaded, edited and saved again. Redesign the whole lot and you've got yourself a brand new game.

Gribit

GRIBIT is three programs in one – a game, a sprite editor and a screen editor. The game can be played as it stands. When you feel that you want to make some alterations, the sprites can be altered with the sprite editor and the screens amended with the screen editor.

Alterations can be made permanent by saving them to disk, so make a backup copy before playing around. All the necessary files are in the Gribit drawer, so you need only drag the drawer to another disk to back it up.

An option screen is displayed after loading the program . The first option is G for Game.

Gribit is played with a joystick plugged into the hole next to the mouse port. To complete each screen you must collect all the mushrooms. Sounds easy enough, but some are locked behind doors.

To get through a door you need to collect a key. Where do you get the keys from? Well, if you remove the red squares, by running over them, objects will start to appear. Apples and cherries will increase your energy – that's the green bar at the right of the screen.

Bonus points are awarded if your energy reaches the top of the screen and you still have three lives. If you have less than three lives, an extra life is awarded instead of the bonus.

Try to avoid the purple frog as contact with him drains your energy. The purple frog can be stopped with a bubble. To blow bubbles press the fire button. To pick them up again just move over them. If the purple frog collides with a bubble he gives up a key.

If you (the green frog) collide with the purple frog a key and some energy is lost. If your energy level reaches zero, a life is lost. If anything falls on your head, a life is lost.

The P key will pause the game. To continue press the Fire button or any key. Pressing the Escape key quits the game and takes you back to the options screen.

The second option on the options screen is S, to edit the screen. Select sprites from the top row with the left mouse button, then place them where you want them on the screen, again with the left mouse button. Screens can be loaded or saved from the pull-down menus. The Options entry in the left-hand menu quits the screen editor and returns you to the options screen.

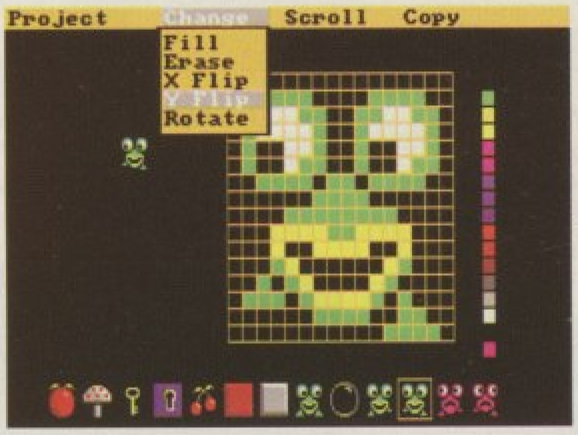
Sprites can also be edited by choosing C from the options screen. Select sprites from the bottom row with the left mouse button. The edit box will automatically update. The pull-down menus allow quick alterations: Scroll left, right, up, down, Xflip, Yflip, Rotate, Fill and Erase.

Colours can be selected by pointing and clicking. The bottom colour is the drawing colour. Save on the left-hand menu saves all the sprites. Options, as you know by now, quits the editor and returns you to the options screen.

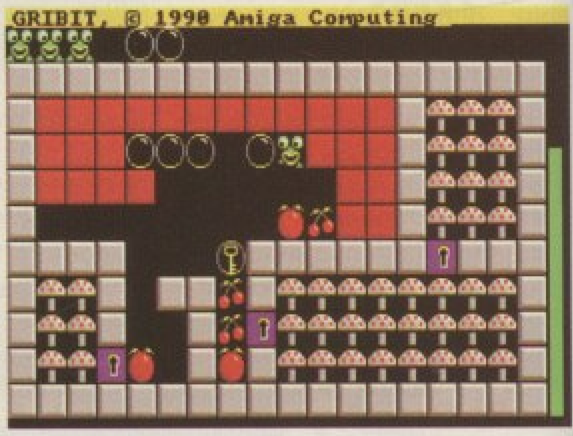
No doubt after playing Gribit, Basic programmers will be itching to know how it works. Double click on the Gribit.BAS icon to view the listing. If you want to customise the program in any way – or more likely borrow some of the routines – you'll need to decrunch the source code first. You'll find the Decrunch command in the C directory of the cover disk.

Copyright

GRIBIT was programmed in HiSoft Basic by Alan Mead and is Copyright © 1990 Amiga Computing. Gribit should *not* be included for sale in any public domain.



If you don't fancy the idea of being a frog all your life, take quick visit to the character editor and change your identity.



The easiest way to get keys is to let the purple frog chase you then hold down the fire button to lay a trail of bubbles.

Othello1.18

AS you have already guessed, this is a version of the classic board game Othello, said to have been invented last century in England. Some absent-minded person then forgot about it until it was re-discovered in 1971 by Goro Hasegawa. It was named Othello when his father, who studied Shakespeare, noted how quickly the board can change, just as the situations in Shakespearean plays often do.

This is not a thrills-and-spills

version of Othello — there are no sound effects or fab graphics. Stuart Bain, who programmed it, wanted this version to be as small and unobtrusive as possible so there would be no memory or multi-tasking problems. Crunched, it tots up to under 2,500.

Othello is very easy to play because it has only one rule. It is played on an 8 x 8 board with black and white counters. At the start of a game, two counters of each colour are placed in the middle of the board. Black has first move.

The object is to place a counter of your own colour in an empty position in such a way that at least one counter of the opposite colour is trapped between it and another counter of your colour, in any direction. The trapped counters then become your colour.

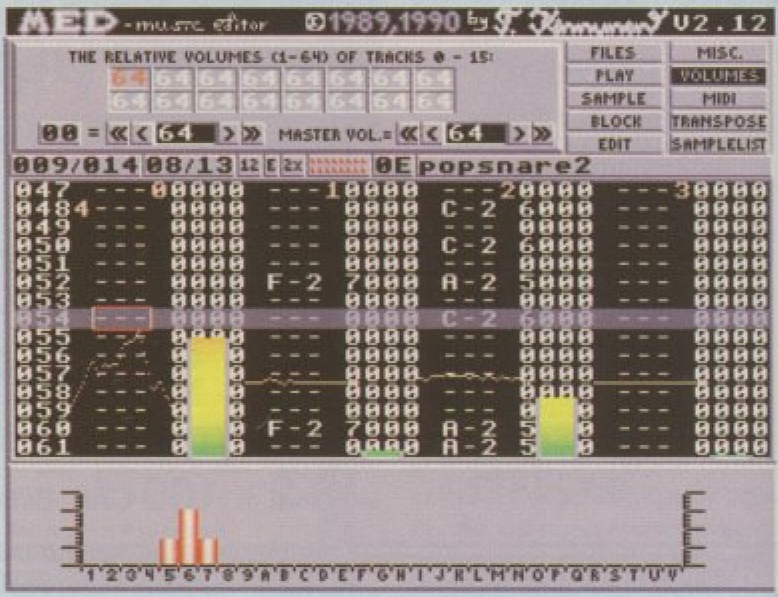
Note that you can flip in several directions at once, so the board can change dramatically in only one move.

In each turn the player must always flip at least one of the opponent's counters. If this cannot be done, the turn is lost.

The game continues in this way until the board is full, until all of one player's counters have been flipped, or until neither player can play. The winner is the player with the most counters – unless it is a draw, of course.

This version is very easy to play. After clicking on the icon, the board will appear in its starting position. The window has normal gadgets to allow closure, dragging





MED v2.13

MED is a music editor. If you've ever used Soundtracker, you'll know what one of those is and you'll feel right at home with MED. If Soundtracker means nothing more to you than a word you keep seeing in Amiga magazines, then you're going to have to get your thinking cap on and prepare your mind for a new concept.

The odds are you've already loaded MED and, provided you didn't get in an awful mess because you didn't know what you were doing, you've probably had a good look around already.

Don't let its apparent complexity put you off. Even if you've never played a musical instrument in your life I can guarantee that you'll be able to create some stunning tunes in no time at all using MED.

Let's start by loading a demo tune.

The first thing MED does on running is ask you for a drive name. Click on the button which relates to the drive you have the cover disk in; probably DF0:.

Next, using the file requester arrows, scroll down the CD014 list and click once on the MED213 directory entry (directories are in light-grey, files are in black). After that directory has loaded, click once on the DEMOS directory.

There are two tunes in DEMOS, the one we're interested in is Song24 ,so click once on that and then click once on the Load Song button to the right of the file requester.

After a short wait the tune will have loaded. You'll see all sorts of things happening on the screen. Don't worry about them, it's just MED letting you know it's working.

Before we go any further let's decide on what each part of the MED display is called so we can avoid confusion later.

The display at top left with the file requester and the load/save/drive gadgets in is called a control panel. There are 10 of these control panels related to the 10 control buttons at top right. The control panel we're looking at right now is the Files Panel.

The big area below with all the numbers in (that's the music!) is called the block display. This is the area you'll use to compose your tunes. In between the block display and the control panel is the status bar.

So let's have a listen to what we loaded. Click once on Play in the double bank of buttons at top right. The control panel will change to display the Play Panel. Find the Play Song button, take a big breath and click on it.

The notes under the highlighted bar are the notes currently being played. It all moves very fast and it all looks very complicated. But persevere, because in a while I'm going to show you how to compose a short tune.

A tune written with MED is made up of blocks. The demo tune we're listening to contains 19 blocks, numbered 0 to 18. In the Play Panel, at top left directly under the MED logo, you'll see a short list of five numbers, one under another. The middle number, the one highlighted, is the block that's currently being played. This list, by the way, is known as the playing sequence list (PSL).

If you watch carefully with the tune playing you'll see that many blocks appear in the PSL more than once – they are repeated. Once a block is composed you can repeat it anywhere you like in the tune simply by inserting its block number in the PSL at the correct point.

A block contains a number of lines for you to enter music on. The default is 64, although this can be adjusted to any number between 1 and 256. How quickly notes get played depends on the setting of the tempo proportional gadget (the slider bar at the top of the Play Panel).

OK, let's compose a little tune.

Select the Misc control button, click on Clear Song Only and then click on OK. What we've done is cleared the tune from memory but left the samples it was using behind so we can use them to compose our own tune.

Click the Sample control button and then click the >> gadget in the Sample Panel until "strings2" appears in the gadget above it. Strings2, which you'll notice is sample number 8, is now the current sample.

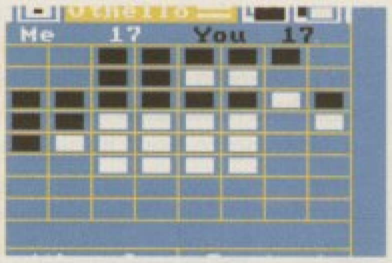
Before we can make sweet music together we need to tell MED that we want to do some editing, and we do this by clicking on the E button on the status bar. When editing is on, the E is highlighted. So do this now. Right, we'll start with channel 0 on the left. You should see a red rectangle (the cursor) in the block display next to the number 000. If not, hold Shift and press the up arrow key to get to the beginning of the block.

Here comes our first note – press the letter P once and let go, just as if you were playing a short note on a piano. You'll see the display for channel 0 change to look like this:

I= 000 E-3 8000

or depth-shifting.

The game waits till you click the left button once before starting play, so that if the Amiga is first it does not immediately play on loading. To place a counter click once on the centre of the square where you wish to play. If the move is legal, your counter will appear and the trapped counters will be flipped over. If it is an illegal



Level pegging so far at 17-17, but methinks Black has a dastardly plan...

position, nothing will happen.

After a short pause to allow you to review the new board situation, the computer will make its reply if it can. The score line at the top indicates the current number of counters as well as the players' colours.

When the game is completed and the result displayed click on Restart for a new game.

For the technically minded the source code for Othello v1.18 is included on the disk. It has been crunched with Powerpacker. Double click on its icon to view it.

If you wish to customise the program in any way — the weightings at the end of the listing may be of particular interest — you will have to decrunch the source first. You'll find the Decrunch

---

000 is the line number, E-3 is the note we entered (the note E from octave 3). The 8000 is a bit tricky, all you need worry about for now is that the 8 is the sample number – strings2 is sample number 8.

As you pressed P you heard the sound of the note. In fact, you're still hearing it because strings2 has been set up to repeat. Press the spacebar to stop the note playing.

Now use the down arrow key to move the cursor (the red rectangle) next to line number 006 and press O, move down to 008 and press I. (Don't forget, you can press the spacebar if you want to to stop the noise.)

Got the idea? OK, now look at Figure I and enter the rest of the notes for this block. Note that next to the line numbers in Figure I are the keys you should press, not what is displayed on the screen. Also note that the figure only shows the notes you should enter, leave all the others blank.

012 U 016 P 022 O 024 I 028 U 032 Y 040 P 048 O

When you've finished select Play Block from the Play Panel to hear what you've done. This block needs to be played twice methinks, so stop the music and click once on the down arrow next to the PSL (the playing sequence list) and then click once on the + button. You'll see another 00 appear in the list.

Now for another block. Get to the Block Panel and click on New Block. Press Shift-downarrow to get the block display to show the new block.

Now to enter the notes for this block, which you'll find in Figure II. You've got the idea of entering notes by now, so I won't pontificate.

Having entered the notes for block 1 go back to the Play Panel and add this block to the end of the PSL so that the list reads 00, 00, 01.

000 Q 002 W 004 E 006 R 012 E 016 W 032 Q 034 W 036 E 038 R 044 E 048 W

Select Play Song to hear what you've done (spacebar or Stop Playing to stop).

At this point it may be wise to save things, just in case of accidents. Select Files, put a data disk in DF0:, select the DF0: button to let MED know you've changed disks, click in the File string gadget, type in a filename, click on Save and then on Save Song. You'll be presented with a requester asking which format you want to save it in. Choose Song+Samples.

Get back to the beginning of block 0 by pressing Shift-uparrow. Now press the right arrow key until the cursor is over the '—' of the first line (000) of channel 1. Make sure editing is on (the E in the status bar should be highlighted) and press the Q key. Now do the same thing for channel 3 on the far right.

Press Alt-spacebar to hear what you've done (Alt-spacebar is the hotkey sequence for Play Block).

Press Shift-downarrow to get to the start of block 1. Move the cursor over the '—' of the first line of channel 1 and press Z. Do the same for channel 3. Press Shift-spacebar to hear what the whole song sounds like after we've added this background hum. It's got a bit more body to it, no?

Right, the last thing we're going to do is use a couple more samples to add a bit of percussion. Get back to the beginning of block 0 (Shift-uparrow) and move the cursor over the ">—" of the first line of channel 2, the only channel we haven't used yet.

Now get the Samples Panel up and click on << until you reach popsnare2 (sample number 4). Now press R and you'll hear the sound of a snare drum and F-2 will appear in the display for channel 2 next to the line number, 000.

Scroll down the display and add the same snare drum note (key R) to channel 2 on lines 016, 032 and 048.

Now click once on << in the Samples Panel to make bassdrum3 the current sample. Move to line 014 in channel 2 and press the E key. Add further bass drum sounds on channel 2 to lines 030, 046 and 062.

Press Alt-spacebar to hear the block as it now sounds.

All we have to do now is add the percussion track to block 1. To do this we'll use a MED shortcut. Stop the music and make sure the cursor is in channel 2 (I assume you are still in block 0 – if not, get back there this minute!) and then select the Block Panel. At top left you'll see some cut/copy/paste/swap buttons for both track and block.

What we want to do is copy the current track in block 0 (the one with the cursor in) to channel 2 in block 1. So click on Track/Copy. Now move to block 1 (Shift-downarrow). Notice that the current track is still channel 2. Click on Track/Paste. You'll see an F-2 appear at the top of channel 2 proving that the track has been pasted in.

That's it. The song's finished. Press Shift-spacebar to hear it. Roger Waters eat your heart out (oops – don't be nasty to Roger, he has good lawyers).

Of course, what we've done here is a very, very, simple tune. MED is capable of <I>far<D> greater things. The more you play with, the more you'll find out about it. Do read the documentation a few times else you'll be missing out on some of the special features.

If you get really stuck you can always write to Teijo Kinnunen, the programmer. His address is in the Read Me file in the MED212 drawer. (He's still at school so give the guy a break if you don't get a reply for a while.)

But I reckon you'll soon get the hang of it. Before you know it you'll be sending me tunes for the cover disk.

Samples

THERE are no samples provided with MED on the cover disk, except those contained within the demo tune, Song24. If you want, and you probably will, you can save out those samples as separate files using the Sample Panel in MED.

Pretty soon though you'll be wanting more. Where do you get them? Your best bet is to phone your local PD pusher and ask him. He's probably got thousands of samples on various Soundtracker disks.

Of course, you could always create your own by using a sampler. This has the added advantage that your tunes will sound more original because the listener will be listening not only to a tune he hasn't heard before, but also to a collection of samples he hasn't heard before.

The third method of getting samples is to borrow them from other tunes. To do this you'll need something called a "ripper". Again, contact your local PD pusher.

If enough of you write in demanding them, we might be persuaded to put a few on the disc in the future.

Copyright

MED v2.13 is Copyright © 1989,1990 Teijo Kinnunen. It has been released as shareware, which means if you use the program regularly you should ease your conscience by sending a small donation to the programmer. If you don't want to send him cash, a present of some kind always goes down well.

Funny money, boxes of biscuits, bug reports, questions, hellos and anything else you like to: *Teijo Kinnunen, Oksantie 19, SF-86300 Oulainen, Finland.*

command in the C directory of the cover disk.

Copyright

OTHELLO v1.18 was programmed in machine code by Stuart Bain and is Copyright © 1990 Amiga Computing. Neither Othello v1.18 nor its source code should be included for sale in any public domain, shareware or freeware disk library. Pink Floyd don't have the monopoly on good lawyers

Fame or Fortune

We are more than happy to pay large sums of money for some of the outstanding and professional contributions we receive. At the same time there seem to be very few authors in this country who are prepared to launch their work as shareware.

Countries such as the U.S.A., Norway, Sweden, Canada and Germany are constantly turning out excellent utilities that put a lot of commercial software to shame. What do we have to offer in this country?

Send your submissions to: The Disk Submissions, Amiga Computing, Europa House, Macclesfield, SK10 4NP.

Pipes of Lost Time

DECEMBER'S tune of the month is a moderately-sized piece of music in the pop-cum-medieval-cum-heavymetal-cum-madrigal mix. Don't ask me to explain that, it will all become apparent when listened to.

The tune came to its composer, Nicholas Heaps, one night when he had decided to produce something really outlandish. Luckily, the results worked. The whole thing took him about a week to finish and it recently won the Electronic Music category in a school music festival.

Nicholas uses an Amiga 500 with 1 meg of ram. Had he only had 512k, he would not have been able to create this song, but the final product runs on a 512k Amiga. If the the tune fails to play, close down all unnecessary windows (don't forget the CLI one) and try again.

Nicholas also has two fairly large speakers and a television plugged into the Amiga. There are three annoying things about his television: It's not a monitor, it gets upset and starts displaying rainbows because his speakers are so close, and there is a single cell on the screen that doesn't like the colour blue. Strange.

Sound Advice

Are you a budding musician looking for fame and fortune? If so, perhaps the Amiga Computing cover disk can give you a little push up the ladder. You never know who might be listening to your music. For instance, Howie Davies got commissioned by a software house after Rock The House appeared on the cover disk.

Original or classical stuff only please, preferably in self- contained modules.

If you insist on sending executable tunes, then try not to send the kind that freezes the mouse pointer or uses the left mouse button to quit; right button or both is better. If your tune needs a separate Play utility, please include that on the disk as well.

QCal

QCAL displays a calendar of the current day, month and year. It then allows the user to display any day/month/year with the mouse, and recall or input an entry for that day.

All changes and additions will be saved in a file, QCal.dat, in the current directory when the program is ended, or when Save is selected. QCal.dat will be created if missing.

This is stating the obvious, but I'd better do so anyway otherwise Green will come round and bash me in again – QCal will only work correctly if you have a battery backed-up clock fitted in your Amiga, like the one in the A501 memory expansion.

If you haven't got a battery backed-up clock, you will need to use Preferences to set the correct day, month, year and time before running QCal. Refer to your user manual for instructions on using Preferences.

QCal can be started form CLI or Workbench. If you specify the -c flag from CLI (run qcal -c) the calendar will display a clock. The clock can be switched on or off by clicking on a hidden gadget in the top right-hand corner of the window.

To add an entry, select day/month/year by using the mouse. Click in the display box at the bottom of the window, then add your entry when the cursor appears. You have two lines in which to make your entry. Press Return at the end of each line to finish. The day number will then be highlighted in a different colour.

To display an entry, select day/month/year by using the mouse. Any days which have an entry will be highlighted in a different colour. The entry for that day will be displayed in the box at the bottom of the window.

There are a few gadgets to play with. Most are self-explanatory ,but a few that could do with clarification:

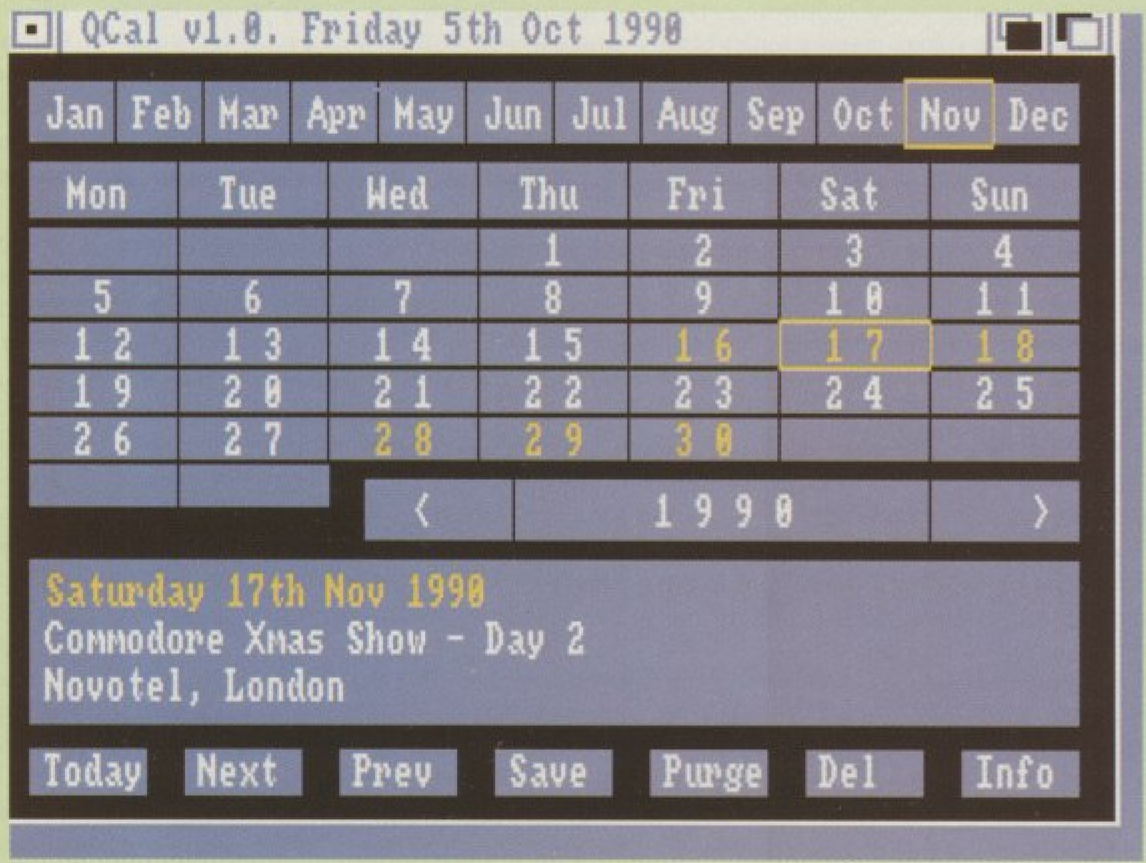
PURGE: Deletes any entries that are before the same day of the previous month. For example, if today was 23-Jun-99 and you selected Purge, any entries on the 22-May-99 and before will be deleted.

SAVE: Saves all entries to a file called QCal.dat in the current directory. All entries will be saved automatically when you quit QCal if any entry has not been saved.

YEAR: Clicking with the left mouse button on the arrows will change the year +/- one year. The right mouse button will change the year +/- 10 years.

Copyright

CAL was written by Malcolm McDonald and is Copyright © 1990 Amiga Computing. It is freely distributable so long as no money whatsoever changes hands. QCal should *not* be included for sale in any public domain, shareware or freeware disk library.



Everything the busy executive needs to thouroughly plan the production of an Amiga mag

COMPUTER EXPRESS



A500 BATMAN PACK



The Commodore A500 Batman Pack must surely rank as one of the most popular computer packs ever! The pack features the **Commodore Amiga 500 computer** with **mouse controller** and **TV modulator**, plus four top software titles. The software includes: '**Batman The Movie**' – rid Gotham City of the cunning Joker, in Ocean's top selling title based on the blockbuster Batman film; **New Zealand Story** – high quality conversion of the leading arcade game; **Interceptor** – dogfight with two F-16s in this leading flight simulator; **Deluxe Paint II** – top quality Amiga graphics package which set the standard for others to follow. Return the coupon for further details.

PACK INCLUDES:

A500 Computer & Mouse	£399.99
A520 TV Modulator	£24.99
Batman The Movie	£24.95
New Zealand Story	£24.95
Interceptor	£24.95
Deluxe Paint II	£49.95
TOTAL RRP:	£549.78
Less Pack Saving:	£150.78
PACK PRICE:	£399.00

£399 INC VAT

STOP PRESS CHRISTMAS PACK ... 4 arcade games deluxe paint 2 modulator and mouse ONLY 399.00

AMIGA SOFTWARE

ACCESSORIES

Full range of Amiga accessories available.

CLASS OF THE 90s EDUCATION BUNDLE

Amiga 500, Midi Interface, D Paint II, Superbase, Publisher's Choice, Dr T's Midi Recording Studio, BBC Emulator and BBC Programs, Maxiplan 500, plus lots of accessories.

AMIGA HARDWARE

A1084 colour monitor – stereo sound	259.00
3.5" disk drive external	86.00
A500 memory expansion with clock	80.00
A590 external hard disk	375.99
Philips colour monitor 8833	264.99
Minigen	109.00

PRINTERS

Star LC10 – No1 low cost printer
Star LC10 Colour
Epson LX400
Panasonic 1180

AMEX

WHEN YOU HAVE BEEN MESSED ABOUT BY THE REST COME AND HAVE A FRIENDLY CHAT WITH THE BEST. COMPUTER EXPRESS.

24 HOUR SALES LINE 0582 475577

All prices and specifications subject to availability and change without notice. All items guaranteed. All prices correct at time of going to press.

SHOWROOM OPENING HOURS: Monday-Friday 9am-5.30pm Saturday 10am-4pm

HEAD OFFICE: COMPUTER EXPRESS • 15 APEX BUSINESS CENTRE • BOSCOMBE ROAD • DUNSTABLE • BEDS • LU5 4SB • 0582 475577 • FAX 0582 668011

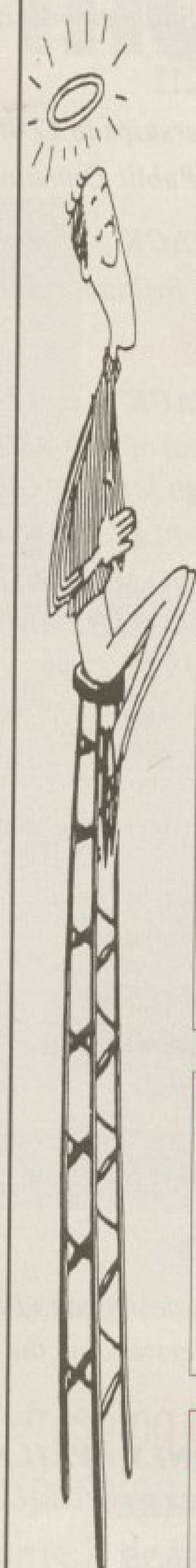
Reach the top with . . .

LCL

Self-Tuition Courses

NATIONAL CURRICULUM

World leaders • Hons graduate/teacher authors • At all major shows • Excellent reviews – £5 off total for 2, £10 off for 3



PRIMARY MATHS COURSE

Complete course of 24 programs and 2 books. Only £24 for:

- Counting
- Addition using units
- Subtraction using units
- Tens and units
- Hundreds tens and units
- Addition using tens and units
- Additions using hundreds, tens and units
- Subtraction using hundreds tens and units
- Subtraction using , tens and units
- 2-10 times tables (taught separately)
- Multiplication problems
- Division
- Short Multiplication,
- Long Multiplication.
- Fractions and Decimals
- Addition, subtraction, multiplication and division of fractions

NATIONAL CURRICULUM Ages 3-12yrs

MICRO MATHS

Complete course of 24 programs and 2 books. Only £24 for:

- Percentages and fractions
- Averages and histograms
- Ratio and proportion
- Polygon properties
- Simple algebraic equations
- Simplification in algebra
- Interest
- Solutions of triangles using sine and cosine formulae
- Profit and loss
- Similar trangles
- Geometric of the circle and its chords
- Advanced statistics
- Appplications of Pythagoras theorem
- Trigonometry
- Fractorisationof algebraic equations
- Graphs
- Simultaneos equations
- Indices in algebra
- Indices in arithmetic
- Vectors
- Matrices

And much much more

Ages 11 – GCSE

MICRO ENGLISH

Complete course of 24 programs, 2 books and a voice tape Only £24 for:

- Punctuation
- Elementary spelling
- Advanced spelling *(like an advanced 'Speak-and- Spell' machine)*
- Vocabulary tests*(meanings of words)*
- English grammar
- From phrases to words
- Words commonly confused *(e.g. effect and affect)*
- Irregular plurals
- 8 comprehension tests, each passage having 20 questions
- 4 programs on making notes *(summarising)*

ORAL COMMUNICATION

- Speaking *(3 programs on reading aloud)*
- Listening

Ages 8 – GCSE

MICRO FRENCH

Complete course of SPOKEN and written french. 24 programs, 2 books and a voice tapes. Only £24 for:

- Pronunciation
- Colours
- Articles
- er verbs
- Wordsearch in French
- ir verbs
- Learning by pictures
- re verbs
- Signs found in France
- oir verbs
- Plurals
- Time
- Graphics adventure game
- Oral exam
- Commands
- Adjectives
- Future tense
- Dictation
- Perfect tense
- Imperfect tense
- Opposites
- Comprehension tests
- Direct object pronouns

Ages 8 – GCSE

MEGA MATHS

Complete A-level course of 24 programs and 2 books, 105 topics! Far too many to list. Includes everything on Calculus and much more. Only £24

A-level Course

Send coupon and cheques/PO's or phone orders or requests for free colour poster/catalogue to:

LCL (DEPT AMC) THAMES HOUSE, 73 BLANDY ROAD, HENLEY-ON-THAMES, OXON RG9 1QB

VISA

or ring 0491 579345 (24 hrs)

Access

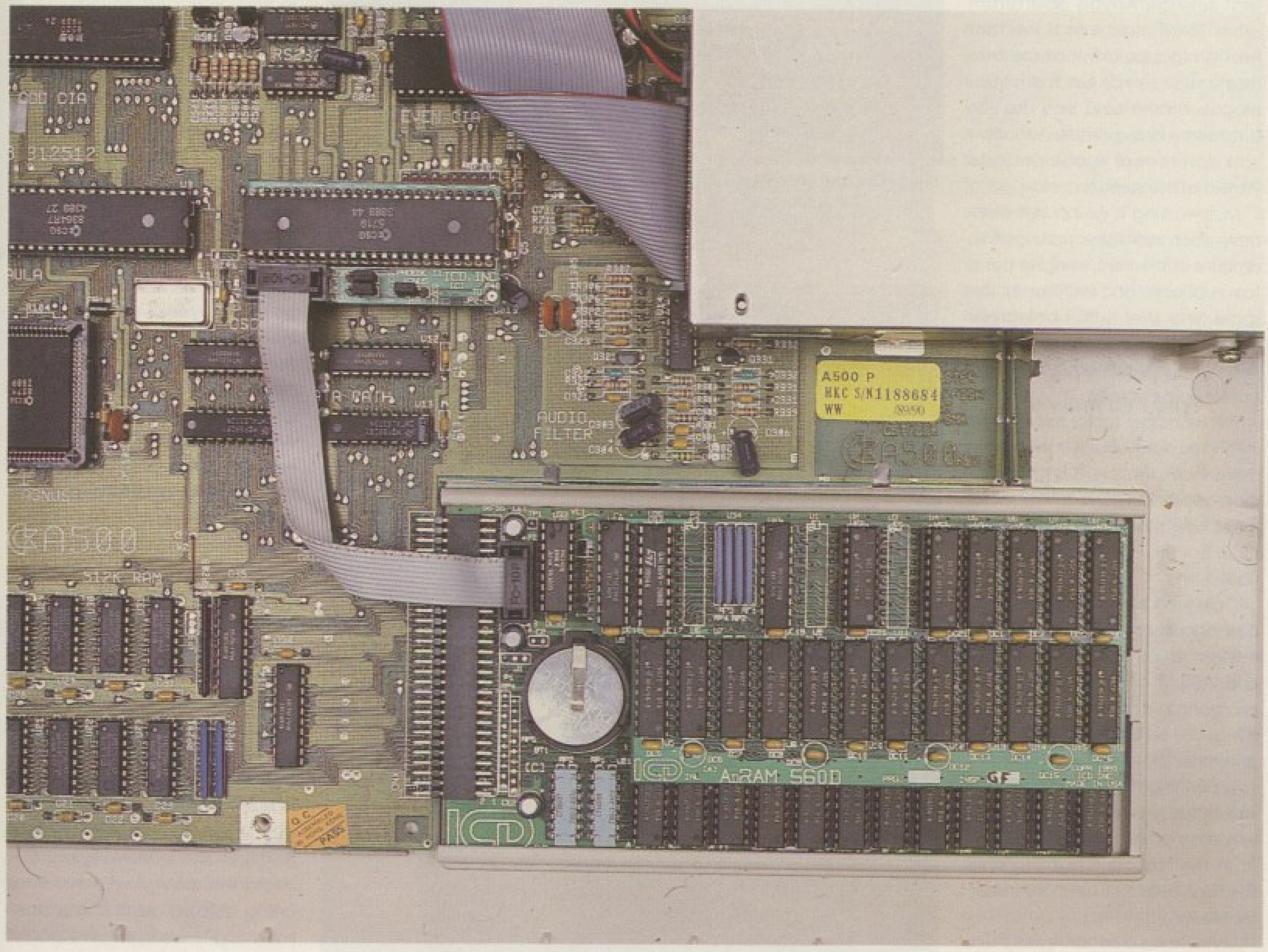
Name ....

Address ....

Title ....

Computer ....

Forget - me - Not



Addressing the refreshing topic of memory expansion, Nic Veitch rams it home.

In business the entire corporate mentality is towards expansion, without which the financial machine cannot survive. Marxism was mostly based on the philosophy of the eventual collapse of this system when expansion could no longer take place.

It is obvious that the anorak dictator, the coding Mussolini should also feel the need to expand. More often than not these needs express themselves as an A590 or second floppy drive – the odd trapdoor half – meg being the only concession to expanding ram.

So why do so few people expand beyond the 1Mb boundary? Why are people willing to spend large amounts of their disposable income on magnetic media, digitisers and other techy gizmos of the age and very little on expanding their system?

The reason is twofold. Software manufacturers are reluctant to bring out a product for which there is a fairly exclusive market. For this reason you won't find many applications that require more than 512k, let alone 1Mb. This doesn't mean that this software wouldn't be greatly enhanced by using more memory, just that the marketing guys behind it don't want to restrict their consumer base.

Of course this doesn't mean that these applications do not recognise extra memory when they see it. Most do, and it can always be used as backing store if nothing else. The point is that many features may be restricted because they have been *designed* to work in smaller amounts of memory.

The second reason is that it is boring. You spend a huge amount of money on a giant memory expansion and what happens? The little number on top of the Workbench screen goes up a bit. No flashing lights, no spinning wheels or funny noises (well, not if

you connected it up properly). Not much scope for pulling the girls/guys there then.

Why do I need it?

Well, you don't actually *need* it. Nobody needs extra ram unless they have a specific task that requires it, and this is usually limited to the small number of people who actually make a living from their machine.

The point is it makes a whole lot of tasks a whole lot easier. Tasks is a key word here. One of the things that sets the Amiga apart from other 16-bit machines is the fact that Amigados can handle true multi-tasking – not just task-swapping as on the Mac and the PC, but tasks running simultaneously – you can format a disk and use Protext at the same time.

Multi-tasking is great, but obviously each task takes up a certain amount of memory. Imagine trying to run DPaintIII and ProPage at the same time. Well, with about three megabytes it is a viable proposition, though you'll have to watch out for your chipmem.

This is another factor to be taken into account when looking at memory expansion. Generally, for most applications the critical factor is not how much ram you have in total, but how much chip ram you have.

Chip ram is the memory which can be directly accessed by the custom chips through their DMA channels. It is, therefore, the only memory that can be used for things like screen displays, sounds and other DMA-intensive activity.

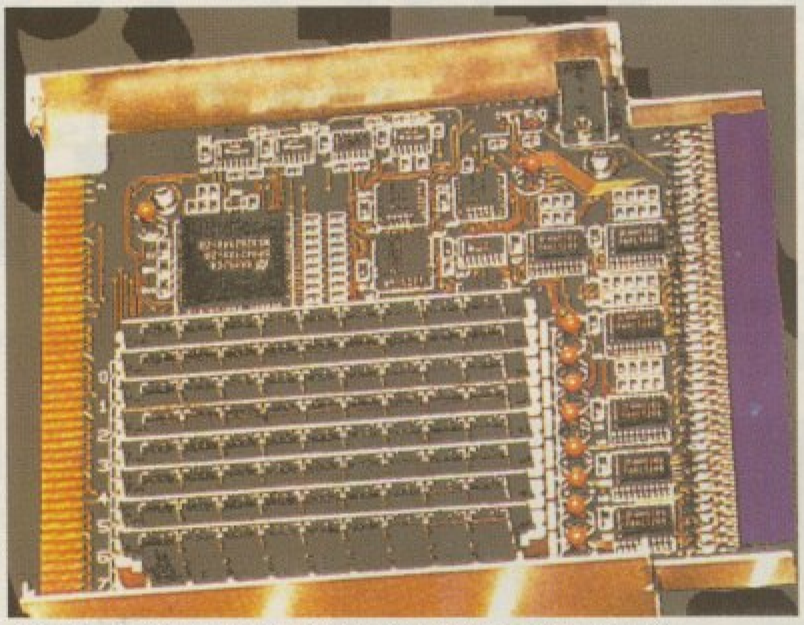
Expanding the total ram of your system will help alleviate this problem since programs will be able to fit in the fast ram, leaving chip memory available for more important tasks.

If you have a Fatter Agnus there is a possibility of expanding your chip ram to 1Mb. Usually this will require some modification to the A500's motherboard, thus invalidating your warranty.

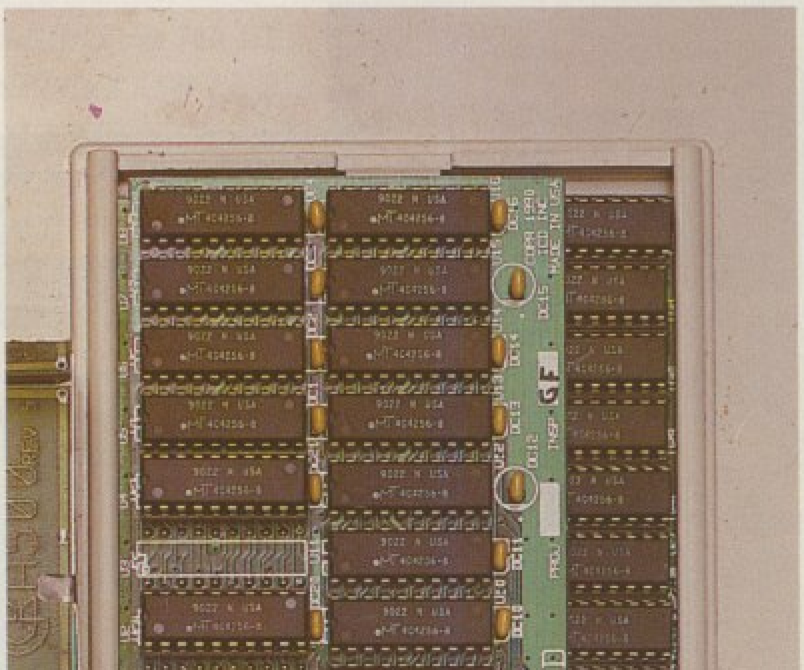
What's about?

Essentially there are two ways to expand your memory. First there is the old favourite trapdoor method. That is, after all, what it's there for. Originally designed to accept the A501 half-meg expansion, there are now quite a few larger varieties about.

The alternative is to expand, naturally enough, through the expansion port. This has the advantage of being much easier to achieve



Inside the Cortex expansion unit. Here we have a fully populated board.



(or offload if for some reason you wish to disconnect the ram at a later date).

Following slightly along these lines, many external peripherals which connect through the expansion port allow for memory expansion. The A590, CBM's hard drive is one example which allows for up to 2Mb in half-meg steps. Similarly the update to the Vortex controller.

Let's have a look at two ways of expanding your memory to mythical levels.

Cortex

The Cortex, from Memory Expansion Systems, is probably the best example of an expansion port type addition.

Visually unimpressive, the unit is a square box which fits snugly in the expansion port. The uninspiring outer case is broken by only three stunning features.

The first is the blanking panel for the through slot. To open this you will have to remove the screws on the underside of the unit. This is not particularly difficult providing you have a brain and a cross-head screwdriver.

There is nothing in the universe more annoying than the lack of a through port, except perhaps the tendency of Volvo drivers to cut out in front of my GPz550.

Imagine the scenario. You have two jolly useful, jolly expensive thingies that need to be connected to the expansion port. Both are fantabulous, but would be truly mega-fabby if you could use them together. But you can't, simply because the manufacturer wanted to save a few quid.

In this respect the Cortex unit excels, having not only a through port, but also a blanking panel to avoid the embarrassment of not being able to use it if you don't have any more expensive peripherals.

The other two notable features are a jack socket for the accompanying power supply and a little light that comes on to tell you that everything is mellow and just don't worry about it, everything's fine.

Why an extra power socket? Well, CBM have a bad history with PSUs. Around 20 percent of the C64s returned in the early days were due to power supply units having burnt out. The Amiga PSU is far more rugged and reliable – reliable, that is, for powering the Amiga and perhaps a few external floppy drives. When it comes to hard drives and 8 Mb of ram leaching of your Amy you may be

in trouble.

There are some people who will maintain that they have memory, hard disks, floppy drives, genlocks and so on running off their A500 with original PSU with no problems. They will probably have a higher percentage of unexplained gurus, disk errors and other nastiness. If in doubt, pump it up, and that's what the Cortex allows you to do.

The unit contains slots for eight 1Mb SIMMs. In other words you can have 2, 4 or 8Mb but not the stages in between. It can be a bit of a nuisance not being able to add ram in small chunks. Since the ram is on a SIMM card, you can *only* use SIMM cards. No more bargain hunting at shows for cheap chips.

Aside from that, it works. What more could you want from a ram card? It is even A1000 friendly.

Adram 540

The Adram 540 from ICD is a trapdoor expansion. Not your normal half-meg job though. The AD540 is expandable, in blocks of 1Mb, to 4Mb. If that still isn't enough, there is a daughterboard option to bring your fast ram even further into the lofty heights of truly elephantine memory (yes, more than 64k!).

The snag with all this messing about in the trapdoor is (as Berk would tell you "there's something down there") that it is just that – messy.

For a start the board is a little too big to fit properly. A little handy work with a scalpel is required to make the trapdoor see eye to eye with your new piece of kit. Then, of course, you have to remove the shielding – not that it made much difference anyway.

Since the memory mapping is all done through Gary, and since he isn't expecting to find 6Mb in the trapdoor, a little piece of hardware is supplied to make him look in the right direction.

A board has to be fitted to sit between Gary and the motherboard. This isn't too tricky ,since those people at CBM have put all the important stuff in sockets – all the better for whipping it out. A ribbon connector connects the Gary board with the expansion card.

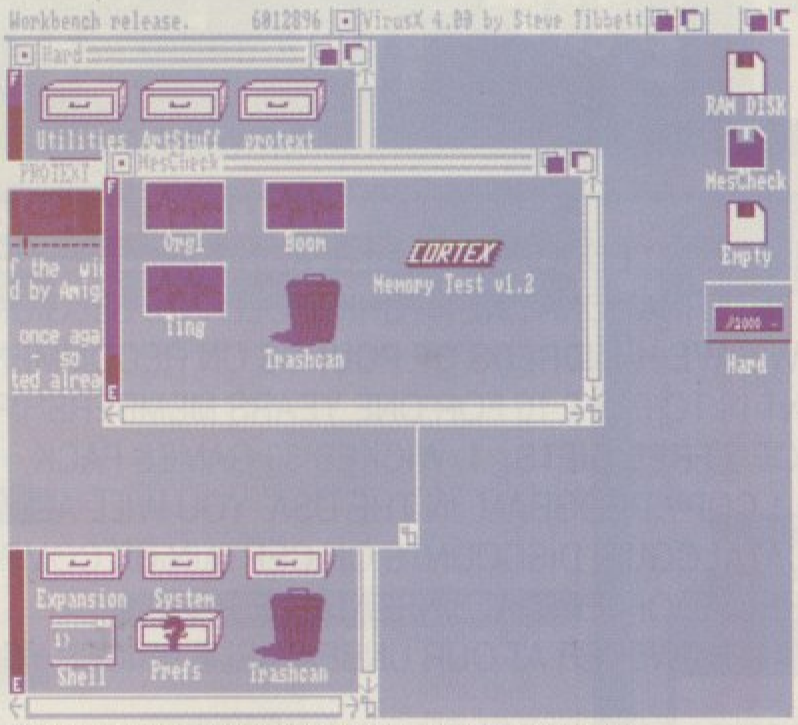
If you want to take advantage of a Fatter Agnus, or if you wish to install the A560D – a daughterboard which gives an extra 2 Mb ram – you will have to get out the soldering iron and do some nerve-wracking stuff.

A jumper lead must be connected between the Gary board and a vacant jumper hole on the A500 motherboard. This is slightly hazardous for those with the DTs, as the hole is situated between the 68000 and the Amiga rom.

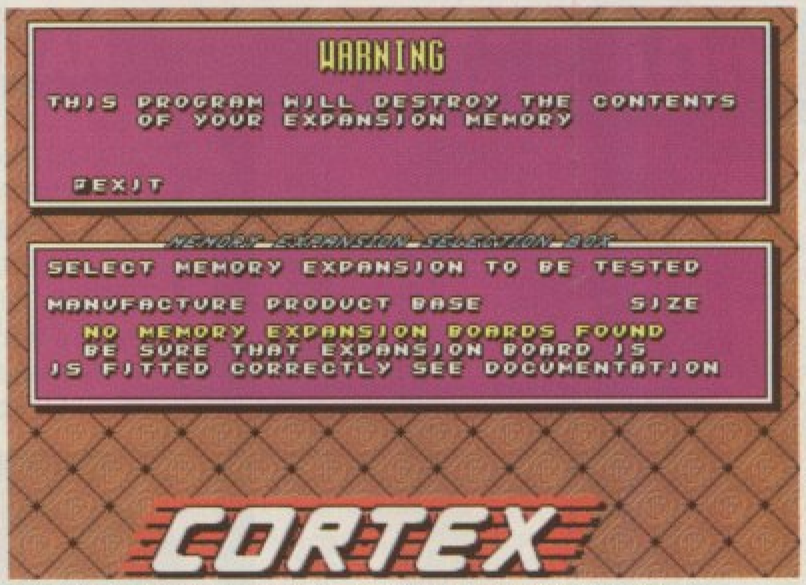
Once installed, you can safely forget about it – there is little chance of it giving any trouble. The only bother is the fact that only 1.5 Mb of ram will auto-configure, the rest will only be mapped in after running the supplied software. This is fast in execution, and can be neatly tapped on to any startup-sequence.

The real advantage of this method is the fact that once installed your Amiga looks absolutely the same. There is no problem with your useable desk space suddenly vanishing, and you won't have to engage in major surgery to be able to use your mouse in your left hand.

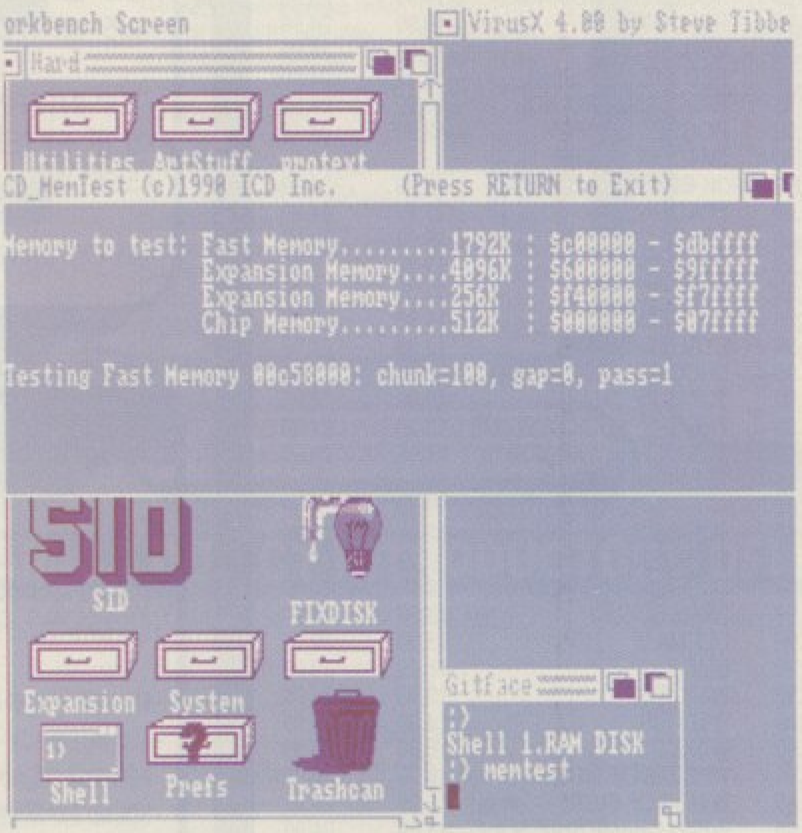
There is no additional power supply for this model, but it is highly recommended that you buy an upgraded PSU if you are using more peripherals that draw their power from your Amy.



The cortex is supplied with a test disk and a few interesting samples



The cortex test software also includes a certain amount of trouble shooting



The test utility supplied with the ICD board is less impressive, but it works!

So what do I buy?

There is no answer to this question. At least, not one that will prevent irate phone calls from thousands of readers willing to extol the opposite case.

The getout wimpy answer is that it's up to you. But of course it is. Adding ram isn't just a question of buying some chips and plugging them in. You have to look at the way your system is going to expand in all directions.

It would be too bad to spend a lot of money on one system only to find out later that you couldn't use it with some other peripheral you desperately wanted.

For example, the Adram will still allow you to use external auto-configure ram, like the chips you can plug into the A590, but obviously you can't use it with the KCS PC board, which has to fit in the trapdoor.

The ram expansion should be the malleable quantity. Let the decisions about other peripherals determine which expansion you buy.

Cortex
Memory Expansion Systems
(051) 236 0480
£299

Adram 540
ICD/Silica
(081) 309 1111
£TBA

AMIGA *direct*

EUROPE'S NR. 1 AMIGA SPECIALISTS

ALL PRICES INCLUDE V

NOW IN BRITAIN „**AMIGA DIRECT**" EUROPE'S TRAILBLAZING AMIGA CLUB, MORE THAN **10.000 MEMBERS.** DUE TO OUR INTERNATIONAL NETWORK (HOLLAND, BELGIUM, GERMANY, USA & ENGLAND) YOU CAN NOW **SAVE HUNDREDS OF POUNDS** ON RECOMMENDED RETAIL PRICES. YOUR ONLY COMMITMENT IS TO PAY £ 10 FOR ONE YEARS MEMBERSHIP. WHEN YOU JOIN, YOU CAN CHOOSE OUT OF 3 **FREE GIFTS: 1.** WICKED 50 GAMES PACK **2.** MOUSEPAD **3.** MARAUDER II, THE NR.1 COPY PROGRAM IN THE USA. YOU WILL ALSO RECEIVE 4 TIMES A YEAR A **FREE COLOUR CATALOGUE,** DISCOUNTS ON CERTAIN UK COMPUTER SHOWS ENTRANCE FEES AND SPECIAL OFFERS AT UNBEATABLE PRICES.

NO OBLIGATION TO BUY!!! HOWEVER AT OUR UNBEATABLE PRICES YOU CAN'T RESIST.

TOP 100 AMIGA GAMES

	MEMBER	RRP
688 ATTACK SUB	15,99	24,99
AMOS GAMES CREATOR	24,99	49,99
AWESOME	19,99	34,99
ARMOUR GEDDON	13,99	24,99
ATF II	13,99	24,99
BILLY THE KID	13,99	24,99
BATTLE COMMAND	13,99	24,99
BACKGAMMON ROYALE	13,99	24,99
BOMBER BOB	13,99	24,99
BACK TO THE FUTURE II	13,99	24,99
BUG BASH/NUCLEUS	8,99	12,99
BATTLE MASTER	18,99	29,99
BLADE WARRIOR	13,99	24,99
BOMBER MISSION DISK	8,99	14,99
BETRAYAL	18,99	29,99
CADAVER	13,99	24,99
CARTHAGE	13,99	24,99
CHAOS STRIKES BACK	11,99	19,99
CHASE HQ II	13,99	24,99
CHESS CHAMPION 2175	18,99	29,99
CODENAME ICEMAN	24,99	39,99
COLONELS BEQUEST	24,99	39,99
COMBO RACER	11,99	19,99
CONQUEST OF CAMELOT	24,99	39,99
CORPORATION	13,99	24,99
DICK TRACY	13,99	24,99
DAMOCLES	14,99	24,99
DAYS OF THUNDER	14,99	24,99
DRAGONS LAIR	27,99	44,99
DUNGEON MASTER	13,99	24,99
ESC. FR. SINGES CASTLE	27,99	44,99
EPIC	13,99	24,99
FLIPIT & MAGNOSE	13,99	24,99
F15 STRIKE EAGLE II	18,99	29,99
F16 COMBAT PILOT	9,99	24,99
F19 STEALTH MISSION	18,99	29,99
F29 RETALIATOR	13,99	24,99
FALCON F16 MISSION DISK	11,99	19,99
FLIGHT OF INTRUDER	18,99	29,99
FLIGHT SIMULATOR II	19,99	34,99
F. SIM SCEN. START. KIT(3)	24,99	39,99
FLOOD	15,99	24,99
FINAL COUNTDOWN	13,99	24,99
GREMLIN II	13,99	24,99
HAGAR THE HORRIBLE	13,99	24,99
INT. SOCCER CHALLENGE	13,99	24,99
KICK OFF II	12,99	19,99
KILLING GAME SHOW	12,99	24,99
KINGS Q. TRIPLE PACK	19,99	29,99
KINGS QUEST IV	19,99	29,99
LOTUS ESPRIT TURBO	13,99	24,99

	MEMBER	RRP
LEMMINGS	13,99	24,99
LEISURE SUITE LARRY III	24,99	39,99
LOST PATROL	13,99	24,99
LOOPZ	13,99	24,99
M1 TANK PLATOON	18,99	29,99
NITRO	11,99	19,99
NAVY SEALS	13,99	24,99
NARC	13,99	24,99
ORIENTAL GAMES	13,99	24,99
OPERATION STEALTH	19,99	29,99
OPERATION HARRIER	15,99	24,99
POWERMONGER	19,99	29,99
PLOTTING	11,99	19,99
PANG	13,99	24,99
PUZZNIC	13,99	24,99
PIRATES	13,99	24,99
POLICE QUEST II	19,99	29,99
POOLS OF RADIANCE	19,99	29,99
POPULOUS	15,99	24,99
PROJECTYLE	15,99	24,99
RED STORM RISING	13,99	24,99
RICK DANGEROUS II	13,99	24,99
ROGUE TROOPER	13,99	24,99
SHADOW OF THE BEAST II (+ T-SHIRT)	19,99	34,99
SPACE ACE	27,99	44,99
SPACE QUEST III	19,99	29,99
SIMULCRA	13,99	24,99
SPELLBOUND	11,99	19,99
SUPREMACY	19,99	29,99
STREET HOCKEY	13,99	24,99
SHOCKWAVE	13,99	24,99
TOTAL RECALL	13,99	24,99
THE SPY WHO LOVED ME	13,99	24,99
TONAK THE WARRIOR	13,99	24,99
TEENAGE MUTANT NINJA TURTLES	13,99	24,99
THE KEEP	13,99	24,99
TIE BREAK	13,99	24,99
TOURNAMENT GOLF	13,99	24,99
TEAM SUZUKI	13,99	24,99
ULTIMA V	19,99	29,99
UMS II	18,99	29,99
WAR JEEP	13,99	24,99
WELTRIS	14,99	24,99
WINGS	18,99	29,99
WHEELS OF FIRE	18,99	29,99
WINGS OF FURY	13,99	24,99
WRLD CHAMP.SHIP SOCC.	13,99	24,99
WONDERLAND	15,99	24,99
YOLANDA	13,99	24,99

RAM EXPANSIONS

- A500 512 K + CLOCK + ON/OFF SWITCH **£ 32,50**
- A500 INTERNAL 1.8 MBYTE RAM CARD **£ 129,99**
- A500 8 MBYTE CARD (2 MB RAM) **£ 219,99**
  WITH -4 MB **£ 319,99** -6 MB **£ 409,99** -8 MB **£ 489,99**
- A1000 EXTERNAL 2 MB CARD **£ 219,99**
- A2000 8 MBYTE CARD (2 MB RAM) **£ 189,99**
  WITH -4 MB **£ 289,99** -6 MB **£ 379,99** -8 MB **£ 459,99**

DISK DRIVES

- 3.5" EXTERNAL A500/1000/2000 **£ 49,99**
- 3.5" WITH DIGITAL TRACK DISPLAY **£ 64,99**
- 3.5" INTERNAL A2000 **£ 49,99**
- 5.25" EXTERNAL 40/80 TRACKS **£ 69,99**
- 5.25" WITH DIGITAL TRACK DISPLAY **£ 84,99**

*ALL EXT. DRIVES WITH THRU PORT & ON/OFF SWITCH

MUSIC

	RRP	MEMBERS
AMAS - MIDI + DIGITIZER	£ 99,99	£ 79,99
FUTURE SOUND STEREO DIGITIZER	£ 79,99	£ 59,99
GOLEM STEREO DIGITIZER INCL SOFTWARE	£ 69,99	£ 54,99
MASTER SOUND AUDIO DIGITIZER	£ 34,99	£ 24,99
MIDI INTERFACE - 2 MIDI OUT/IN/THRU	£ 24,99	£ 17,99
PERFECT SOUND 3.0 - NEW VERSION	£ 69,99	£ 49,99
SOUND EXPRESS STEREO DIGITIZER	£ 39,99	£ 29,99
SOUND SAMPLER - AUDIO	£ 24,99	£ 19,99

SPECIAL OFFERS EVERY MONTH TOP 25 SEE

ALL PRICES INCLUDE VAT

4 WHITTON ROAD
TWICKENHAM
MIDDLESEX TW1 1BJ
ENGLAND
TEL. (44) 081-891-6704
FAX (44) 081-892-8127

AMIGA direct

PROFESSIONAL SOFTWARE

COMMUNICATIONS

	MEMBER	RRP
INTRO CAD	39,99	59,99
PROFESSIONAL DRAW 2.0	79,99	129,99
X CAD DESIGNER II	69,99	114,99
X CAD PROFESSIONAL	199,99	459,99
MODELLER 3D	49,99	79,99

COMMUNICATIONS

	MEMBER	RRP
A TALK III	49,99	89,99
BBS PC BULLETIN BOARD	59,99	119,99
SKYLINE BBS SYSTEM	59,99	119,99

DESKTOP VIDEO & GRAPHICS

	MEMBER	RRP
ANIMAGIC	39,99	79,99
ART DEPARTMENT	49,99	89,99
BROADCAST TITLER	169,99	299,99
DELUXE PAINT III	49,99	79,99
DELUXE VIDEO	9,99	14,99
DELUXE VIDEO III	69,99	99,99
DESIGN 3D	39,99	79,99
DIGIPAINT III	39,99	69,99
ELAN PERFORMER 2.0	69,99	109,99
LIGHTS, CAMERA & ACTION	39,99	64,99
PHOTON VIDEO CELL ANIMAT.	49,99	99,99
PAGE FLIPPER FX PAL	69,99	99,99
PAGE RENDER 3D	69,99	99,99
PRO VIDEO GOLD	149,99	249,99
SCULPT 3D XL	79,99	149,99
SCULPT 4D JUNIOR	69,99	119,99
SCULPT 4D	249,99	499,99
TURBO SILVER 3D	79,99	139,99
TV TEXT PROFESSIONAL	79,99	129,99
WALT DISNEY ANIM. STUDIO	79,99	129,99

DATABASES

	MEMBER	RRP
SUPERBASE PERSONAL II	39,99	99,99
SUPERBASE PROFESSIONAL	139,99	249,99

DESKTOP PUBLISHING

	MEMBER	RRP
PROFESSIONAL PAGE 1.3	129,99	199,99
PRINTMASTER PLUS	24,99	39,99
PAGESTREAM 2.0	79,99	149,99
PAGESETTER 2.0	34,99	59,99

INTEGRATED PACKAGES

	MEMBER	RRP
PUBLISHERS CHOICE	69,99	99,99
GOLD DISK OFFICE	119,99	149,99

ACCOUNTS

	MEMBER	RRP
HOME ACCOUNTS	18,99	29,99
SYSTEM 3	29,99	49,99

MUSIC

	MEMBER	RRP
AUDIOMASTER III	49,99	89,99
BARS & PIPES	139,99	219,99
COPYIST APPRENTICE	49,99	89,99
COPYIST PROFESSIONAL	149,99	239,99
DELUXE MUSIC CONSTR. SET	49,99	69,99
MIDI RECORDING STUDIO	34,99	59,99
MUSIC X 1.1	79,99	149,99
MUSIC X JUNIOR	44,99	79,99
TFMX	27,99	49,99

PROGRAMMING LANGUAGES

	MEMBER	RRP
ARGASM 68000	39,99	59,99
AZTEC C PROFESSIONAL	79,99	129,99
BENCHMARK MODULA 2	79,99	169,99
DEVPAC 2.0	39,99	59,99
LATTICE C V5.5	149,99	249,99
LATTICE C++	189,99	299,99

SPREADSHEETS

	MEMBER	RRP
ADVANTAGE	69,99	99,99
MAXIPLAN PLUS	79,99	149,99
SUPERPLAN	49,99	99,99

WORDPROCESSORS

	MEMBER	RRP
PEN PAL	69,99	129,99
PRO WRITE 3.0	79,99	139,99
SCRIBBLE PLATINUM	34,99	49,99
WORD PERFECT 4.2	129,99	229,99

UTILITIES

	MEMBER	RRP
AMAX II MACINTOSH EMUL.	99,99	169,99
AMAX II (MET ROMS)	179,99	259,99
AMI ALIGNMENT DISK DR. KIT	24,99	39,99
AMI EDUCATION- 4 programs	9,99	19,99
AMIFAKT - invoice program	9,99	19,99
AMIHARD - hard disk utility	9,99	19,99
AMIKAS - cashbook	9,99	19,99
AMIWORD - word spelling (educ)	7,99	14,99
BAD OPTIMIZER - disk utility	22,99	39,99
BUTCHER - graphic utility	19,99	34,99
CROSS DOS 4.0 - ms dos utility	22,99	39,99
CLI TUTORIAL - cli	7,99	14,99
DOCTOR AMI - diagnostics	24,99	39,99
FAT TRACKS - copy program	34,99	49,99
MARAUDER II - NR.1 USA copy pr.	9,99	19,99
PIXMATE - graphic utility	23,99	49,99
PROCLIPS -struct. cliparts(150)	14,99	24,99
QUARTERBACK 4.0 - hard disk u.	29,99	59,99
RAWCOPY 1.36 - copy utility	34,99	49,99
WORKBENCH 1.3 + MANUAL	12,99	19,99

GOODS ADVERTISED SUBJECT TO AVAILABILITY
PRICE SUBJECT TO CHANGE WITHOUT NOTICE

VIDEO

	RRP	MEMBERS
DIGIVIEW 4.0 VIDEO DIGITIZER	£ 149,99	£ 79,99
VIDI AMIGA FRAME GRABBER	£ 114,99	£ 84,99
VIDI AMIGA + VIDI CHROME	£ 134,99	£ 94,99
RENDALE 8802 GENLOCK	£ 299,99	£ 149,99
RGB SPLITTER	£ 69,99	£ 54,99

SCSI HARDDISKS & FILECARDS

	A2000	A500/1000
40 MBYTE QUANTUM	£ 399,99	£ 449,99
80 MBYTE QUANTUM	£ 599,99	£ 649,99

ACCESSORIES TOP 20

3.5" DISKS BOX OF 10 - BRANDED EDIXA DSDD	£ 4,99
3.5" DISKBOX (80) - WITH LOCK	£ 4,99
5.25" DISKS BOX OF 10 - BRANDED EDIXA DSDD	£ 2,49
5.25" DISKBOX (100) - WITH LOCK	£ 4,99
1084 S STEREO MONITOR FROM CBM	£ 199,99
BOOTSELECTOR - BOOT FROM DF0/DF1	£ 7,99
ELECTRONIC BOOTSELECTOR - DF0/DF3	£ 19,99
FLICKER MASTER	£ 12,99
KICKSTART CARD - INCL. 1.2 OR 1.3 ROM	£ 39,99
KCS POWER BOARD - PC EMULATOR	£ 299,99
LIGHTPEN - A500/2000 INCL. SOFTWARE	£ 39,99
MOUSE - ROCTEC AMIGA MOUSE	£ 19,99
MOUSEPAD - TOP QUALITY	£ 2,99
MOUSE MASTER - SWITCHER MOUSE/JOYSTICK	£ 12,99
MODEM - 2400 BAUD	£ 99,99
NORDIC POWER - AMIGA ACTION CARTRIDGE	£ 59,99
TAPE STREAMER - 60 MBYTE FROM	£ 399,99
TRACKBALL - CONTRIVER	£ 29,99
TV MODULATOR - TO CONNECT TV	£ 17,99
VIRUS PROTECTOR - HARDWARE/SOFTWARE	£ 12,99

AMIGA DIRECT INTRODUCTORY OFFER

Mail to AMIGA DIRECT, 4 WHITTON ROAD, TWICKENHAM, MIDDLESEX TW1 1BJ, ENGLAND   Our telephone no.: (44) 081-8916704   Fax: (44) 081-8928127

Please send me ____________ £ ____________ £ ______

____________ £ ____________ £ ______

Type of computer ____________ total post and packaging £ ____________ Total £ ______

Software: Post & packaging within the UK £ 1,50. Overseas £3,00. Hardware: UK £ 2,50 Overseas £ 4,00. Courier service £ 7,00   Membership only £ 10,00

o Cheque enclosed   o Visa/Access/Mastercard   Name: ____________ Tel.no. ____________   Total enclosed £ ______

o Postal order

o Credit card no.   Adress: ____________

____________   Post Code: ____________ Signature ____________

9.95
k Version
34.95
19.95
37.95
5.99
teed
89.95
4.95
Amiga
£114.95
£19.95
rp £6.95
99.95
CK
user
£49.95
£89.95
£39.95
CE
.95
nas

THE star COMPUTER PRINTERS

Being Star registered dealers we only sell official UK machines which come with a full 1 year guarantee. Beware of inferior imported products.

PRINTERS	RRP	OUR PRICE
Star LC10 Mono 144/36 cps	£229.95	£149.95
Star LC10 II 25% faster version	£263.35	£169.95
Star LC10 colour, 7 colours	£297.85	£189.95
Star LC24-10 - 24 pin multifont	£343.85	£229.95
Star LC24-15 wide carriage version of LC24-10	£573.85	£389.95
★ Star FR10 300/76 cps, 31K buffer, 16 NLQ fonts	£527.85	£369.95
★ Star FR15 wide carriage version of FR10	£688.85	£459.95
★ Star XB24-10 professional 24 pin series, 27K buffer	£688.85	£459.95
★ Star XB24-15 wide carriage version of the above with 41K buffer	£907.35	£599.95
★ Star LS08 LASER PRINTER 1Mb Ram, 300 x 300 dpi	£2172.35	£1399.95
Star LC10 sheet feeder (auto)	£74.75	£59.95
Star LC10 mono ribbons	£5.95	£3.95
Star LC10 colour ribbons	£7.95	£5.95
Star LC24-10 ribbons	£7.95	£5.95
Star LC10 quality dust cover	£7.95	£5.95

★*12 months on-site maintenance*

THE NEW 200 SERIES FROM star

"The best printers just got better!"

LC-200 FACT FILE

- ☆ Multi-purpose 9-pin, 80 column dot matrix printer with colour
- ☆ Black and colour ribbons included as standard
- ☆ Electronic dip switches (see LC24-200)
- ☆ 180 cps draft elite/45 cps near letter quality
- ☆ High speed draft facility 225 cps at 12 cpi
- ☆ Swivel selectable push or pull tractor
- ☆ Bottom feed
- ☆ Advanced paper parking with sheet feeder installed
- ☆ Eight resident NLQ fonts: Courier, Sanserif, Orator, Script and italic versions

RRP £297.85 **OUR PRICE £199.95**

LC24-200 FACT FILE

- ☆ Versatile 24-pin 80 column dot matrix printer
- ☆ 200 cps in draft elite/67 cps in letter quality mode
- ☆ 10 resident LQ fonts
- ☆ A high speed draft facility of 222cps at 10cpi
- ☆ Swivel selectable push or pull tractor
- ☆ Bottom feed
- ☆ Advanced paper parking with sheet feeder installed
- ☆ The economy of first and last line printing
- ☆ 7 K-byte buffer expandable to 39K-bytes
- ☆ 11.7" carriage (A4 in landscape format)
- ☆ Multi-part mode for 1 + 4 copies

RRP £366.85 **OUR PRICE £239.95**

LC24-200 COLOUR FACT FILE

- ☆ Multi-purpose colour version of the 24-pin LC24-200
- ☆ Seven colour printing - black, purple, orange, green, pink, blue and yellow
- ☆ 30 K-byte buffer expandable to 62 K-bytes
- ☆ 10 resident letter quality fonts: Sanserif, Times Roman, Courier, Prestige, Script and italic versions
- ☆ Eelctronic dip switches operable from the push button front control panel (as the LC24-200 mono version)
- ☆ Optional font cards including Russian
- ☆ Standard black ribbons available for economy purposes

RRP £424.35 **OUR PRICE £279.95**

—X— NEW —X—

MUSIC-X JUNIOR

"provides everything that the average amateur musician could possibly require" **AMIGA FORMAT**

N.B. Fully compatible with Music X

RRP £79.95
OUR PRICE £49.95

—X— NEW —X—

MUSIC-X

Enhanced 1.1 Version
Widely acknowledged as the best music package available. Now with even more enhancements it cannot be beaten

N.B. Be wary of older versions being sold cheaper

RRP £149.95
OUR PRICE £89.95

—X— NEW —X—

MIDI INTERFACE

Our own beautifully designed product, colour co-ordinated and designed to sit on your Amiga.

Features: 1 x in, 1 x thru, 2 x out. Comes complete with midi lead (extras: £2.99)

RRP £29.95
OUR PRICE £19.95

ORIGINAL COMMODORE PERIPHERALS

MEMORY CLOCK EXPANSION

Increases the power of your Amiga 500 and allows you to use even more sophisticated software.

FEATURES

- 512K RAM (user memory)
- Real time battery backed clock/calendar remembers date and time even when Amiga is switched off
- Easily fitted

INCLUDES

- Captive '91% Amiga Format'

RRP £99.95 **OUR PRICE £59.95**

HARD DISK DRIVE

20MB Hard Disk

Increased software storage - each hard disc can carry the equivalent of more than 20 floppy disks. Faster access to your Amiga 500 software.

FEATURES

- Autoboots your Amiga 500 (with Kickstart 1-3)
- Fast access time
- Sockets for up to 2Mb of RAM
- Built-in fan

	RRP	OUR PRICE
Standard	£299.95	£269.95
1 Meg RAM	349.95	£299.95
2 Meg RAM	£399.95	£349.95

EXTERNAL FLOPPY DISK DRIVE

Makes your Amiga software easier and quicker to use.

FEATURES

- Compatible with all Amigas (500, 1000, 2000, 3000)
- 880K Bytes formatted capacity
- No external power required

INCLUDES

- Gremlins 2 The new batch

RRP £99.95 **OUR PRICE £89.95**

TELESALES ORDER LINE 0767 681760 (8 lines)

DOWLING

HOW TO ORDER

Access VISA

BY PHONE

Simply call our head office quoting your Access/Visa number on

(0767) 681760

(8 lines)

BY POST

Make cheques, building society drafts or postal orders payable to:

Dowling Computers

DELIVERY (UK Mainland, most areas)

Please add £6 courier delivery for orders over £100, add £2 p&p for orders under.

★★★★★★★★★★★★★★

GOLD CLUB SERVICE

- ★ 7 day money back guarantee if not completely satisfied
- ★ 30 day exchange for new policy should a fault occur
- ★ 1 year guarantee giving FREE collection and delivery service should a fault occur
- ★ Exclusive gold card with personal membership number entitling you to special offers
- ★ All this for a nominal £10 per item over £100

PRICE PLEDGE

We know the majority of you prefer to buy from us but are sometimes tempted by smaller companies offering a £1 or so price difference. That is why we have now introduced our

"PRICE PLEDGE"

"WE WILL MATCH ANY PRICE OFFERED ELSEWHERE ON A SAME PRODUCT BASIS"★

★ Subject to stock

WHY CHOOSE DOWLING?

- ★ **ESTABLISHED OVER 4 YEARS**
  With a growing reputation for "putting the customer first". We intend to satisfy many more customers for years to come
- ★ **TECHNICAL SUPPORT/ON-SITE ENGINEERS**
  Employing over 20 specialist staff, we are equipped to deal with the majority of queries
- ★ **FULL TESTING PROCEDURE**
  All computer hardware is tested prior to despatch, proving Dowlings commitment to customer care

So choose Dowling and put our reputation to the test!

Escape from Reality

Just as your favourite mag is due to be at the printers, Nic Veitch tries to escape the slings and arrows of outrageous publishing by retreating into a world of his own

THERE has been a lot of talk about the prospects of virtual realities in the future and about how Amiga technology is at the forefront of these developments. Maybe there's been too much talk. Virtual reality is not a dream of the future – it is with us here today, and in fact, has been for some time.

Virtual reality is a term which can be applied to many computer software constructs. It implies an interactive simulated environment which would certainly be satisfyed by say, a 3D maze game or even a flight sim. But it is not only in these alternative realities that we already have development.

There is a lot of interest in constructing a virtual reality analogous to our own, that is, a complete reality as close as possible to our own but under our control.

Real developments began to take place in this field with the arrival on the international science scene of a concept known as chaos theory. Some high level simulation of real world variables was required to explore the ramifications of this discovery.

The quest for reality through artificial data was well supported in the area of graphics too. The aspiration was to produce a photorealistic simulation of a landscape that only existed in the data banks of a computer.

While it is a matter for philosophers to mull over how it is possible to judge the apparent reality of a display, for the common man it is easy to see that at the moment we are as close as makes no difference. All he has to do is watch some of the computer generated adverts that assault us every night on the TV.

Do we need to justify this attempt at control over the reality we inhabit? Well, no. Not really. But that never stopped anyone. Ray tracing packages, it is argued, are a great aid to visualisation in design work. That may be true, but in my experience all the pretty pictures were produced after the design was more or less finished. In fact, if a designer hasn't got a pretty good idea of what something looks like before rendering then he shouldn't have been given the job in the first place.



Texture mapping expands the realm of raytracing into one of near photorealism

Its real use is communicating this information to others less technically minded. Or for creating almost photorealistic images of imaginary – and therfore alternatively real – scenarios. Or for having fun with.

The point? Ray tracing packages, like little girls, need no justification. They are also quite moody and fairly unpredictable, but I'd better not say any more or we'll get letters.

Real 3D

A few months ago if you were talking ray tracing on the Amiga you were talking Sculpt 3D. Now there is a choice. Two months ago we saw the release of Marcam's 3D Professional. And now we have Real 3D from Active software.

There is a certain attitude that seems to prevail in terms of ray tracing on the Amiga, to the effect that Sculpt is the standard against which all others should be judged. To a certain extent, since it has been the only major selling ray tracing package in this country, that view is valid, but it would be very unwise to adopt standards just yet.

The reason for this is that Real 3D works in a way fundamentally different to Sculpt's approach. Sculpt considered each surface as being made up from small triangular flat planes. Every surface can be approximated in this way, the number (and therefore the size) of triangles used determining just how much deviation there would be between the true surface and this approximation.

The approach of Real3D is to consider each surface as just that, a surface in mathematical space. Only when it comes to the actual rendering is this surface quantized, broken from an infinite landscape into finite chunks of picture definition.

The advantages of this method are easy to realise when you see your first picture. Gone are the angular surfaces that were so characteristic of anything produced by Sculpt. Added realism is the bonus.

It also makes the components easy to rescale. In Sculpt when an object was created it was necessary to give it scale by defining how many points were to represent the shape. This meant if that object was used larger at a later date the triangular planes would be clearly visible.

If a large number of points were specified originally, to account for later changes in scale, this would result in higher rendering times for that object, no matter what size it was used at. Clearly an undesirable compromise would be necessary. So we see that early on, although the inevitable comparisons will be made to Sculpt, the approach is quite different.

Design

The design area, where all the serious mucking about and coffee

drinking goes on, will be familiar to anyone who has used a CAD or ray tracing package.

Three views of the "landscape" are presented, in wireframe form, arranged in orthographic projection. If you like, each view is a window on to the design area from a different plane, one for each of the three dimensions.

Each object must be designed either from the extensive range of primitives, or using one of the tools (which we will cover later).

A primitive is a representation of a simple object such as a sphere, a cube, a cone or whatever. Any shape or size of building block which Fisher Price have ever manufactured is represented in some way or another. Each of these objects can come in any size or colour.

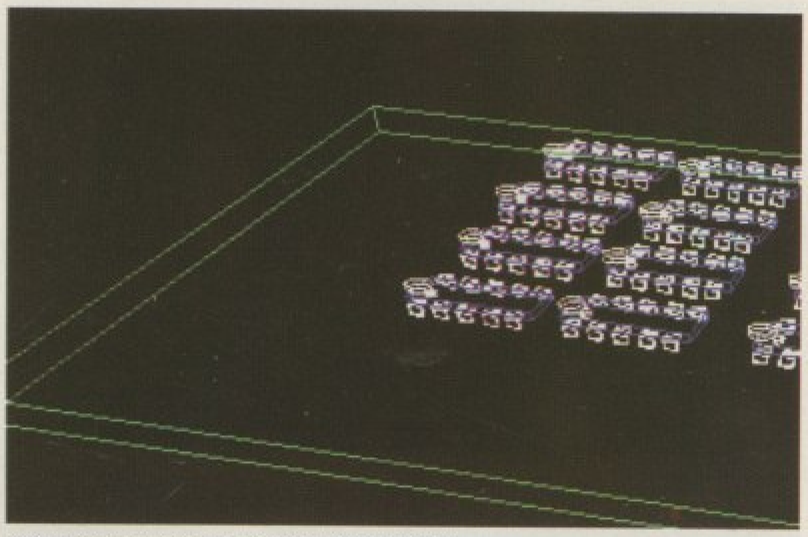
Complex forms can be created by combining these primitives. In addition to simply placing the objects so that they connect up, Real 3d allows a full complement of Boolean functions to be performed. These include ANDing, ORing, XORing and most other combinations you can probably imagine.

The use of primitives – or prims – and the additional ability to combine them logically with other objects lends itself to an engineering form of design. The operations performed on the prims are very much akin to the kind of shaping, milling and forming that would go on in the workshop.

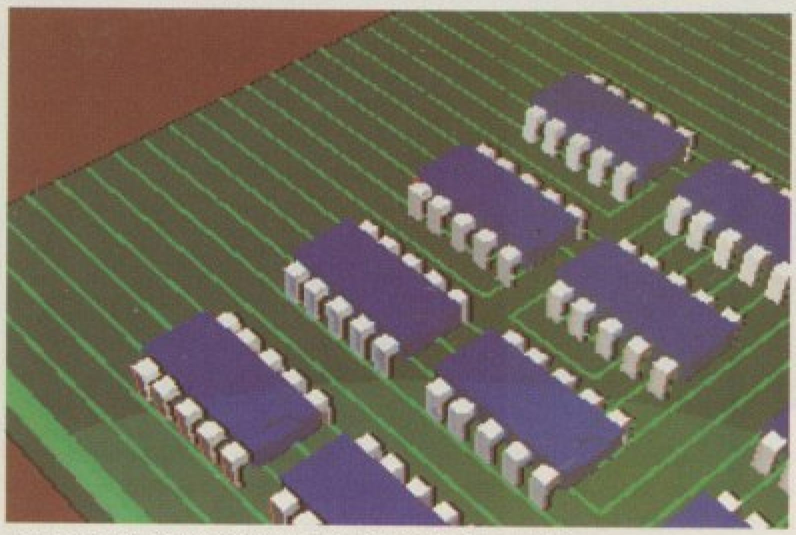
The windows can be resized to facilitate the positioning of small objects, and in fact the entire screen can be given up to the view from one window. Since most design work is usually and easily accomplished in two windows I still find it difficult to believe that no one has ever included a "view two windows only" option.

The co-ordinate system can be switched from absolute (x-y position from the origin) to relative (x-y position from the last selected point). Judicious use of the Amiga-arrow key combination is called for to accurately position the cursor, unless you have a remarkably good mouse or a remarkably steady hand.

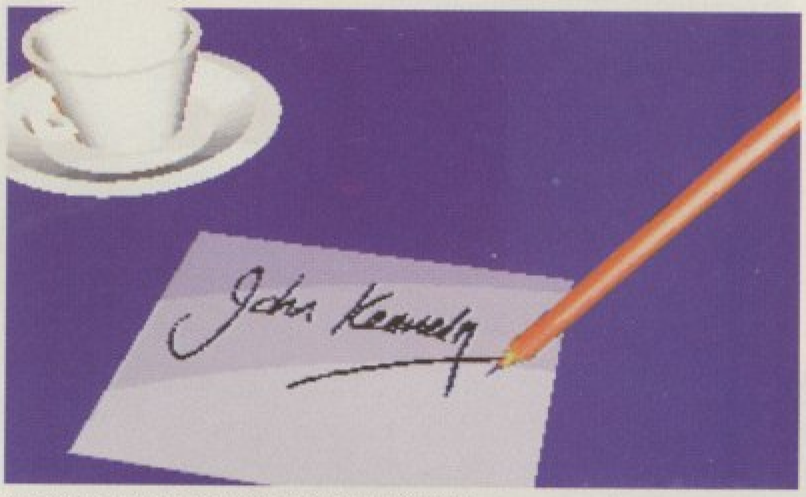
The wireframe views themselves can also be modified. There are good reasons for deleting wires from the view of an object: In complicated ones in can often be



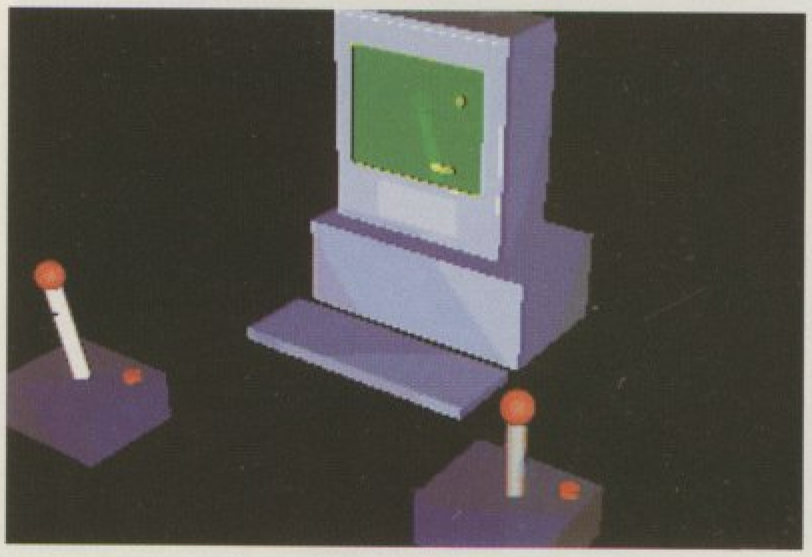
The wireframe preview from a circuitboard effort...



And here is the finished product. Perfect presentation graphics



Creativity bordering on sheer poseyness here I think



a lot easier to work out just exactly what is going on with a few less wires hanging around. It also makes the screen refresh a good deal quicker.

Tools

In addition to manipulating prims, objects can be made using a variety of tools. The most useful of these is undoubtably the lathe, which is in some ways better than the real thing.

Having entered the position and orientation of the spindle a profile line can be drawn. this profile is then rotated around the designated axis to give a solid object. It is possible with this tool to bring the workpiece to a point anywhere along the spindle (which in real life would have the work flying across the workshop at 600 r.p.m.).

The rectangular and cylindrical tube tools will allow the designer to flow a tube of defined cross section along a profile line. These two are very useful for creating everything from handlebars to chairs.

Lastly there's the pixel tool. Any IFF can be read in and converted to a selected object, ideal for rendering that corporate logo or portrait of your good self.

Hierarchy

This is one of the most impressive features of this package. Also objects are created in a hierarchy. This means that, for example, if you were to create a stool you could either have the object grouped as : seat, leg1, leg2,leg3 and leg4, or as : seat and legs, where legs was a lower hierarchical level.

There may not seem to be much difference at this stage, but supposing I now want to make all the legs green. In the first example I'd have four operations to complete, one for each leg, whereas in the second example I could do the same job in just one operation.

Saving and keeping large libraries of objects also becomes more feasible. You could use the chair in any one of many potential scenarios so it's nice to be able to identify that as one component of a scene.

Hierarchical systems will save you effort and headaches every time, but you must use them prop-

erly. A certain amount of thinking is required to plan out your object before you lay mouse to window.

Macros

Macros, short sequences of automatically executing commands, are well supported in Real3D. It is often necessary to repetitively perform a series of operations, for example, creating a row of 10 copies of one object.

This is where macros come in. Start recording, copy the object and move it. Now successive operations can be performed by the press of a button. Not only is it labour saving but it is more precise than trying to do the operations manually.

Materials

In order to create a true photorealistic representation of a scene, account must be taken of the different light-affected characteristics of certain types of material.

Glass, for example, is almost completely transparent, and yet at the same time highly reflective, whereas metallic surfaces are reflective but not in the least transparent.

A whole range of materials come pre-defined with Real3D but you are at perfect liberty to design your own if you see fit. Sliders control the brilliance (reflectiveness), transparency and "speed of light" through the substance.

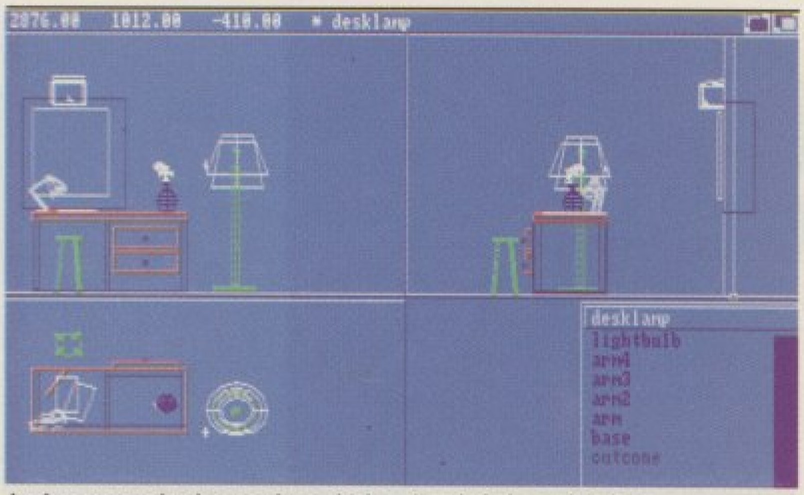
The speed of light is actually referring to the refractive index of a transparent body, the measure of how much light gets bent as it enters. It is possibly to choose a refractive index far above any that actually exist for any material on this planet.

Materials may be merged, saved and loaded at any time, but remember to load the right materials before you start fiddling around with a scene. Fortunately the materials can be stored as sets, so you can tie in the name of a range of materials with any particular set of scenes you are working on.

The bending of light through objects is quite useful. It is quite conceivably to create a working lens using real 3D, though calculating it's focal point may be a little tricky.

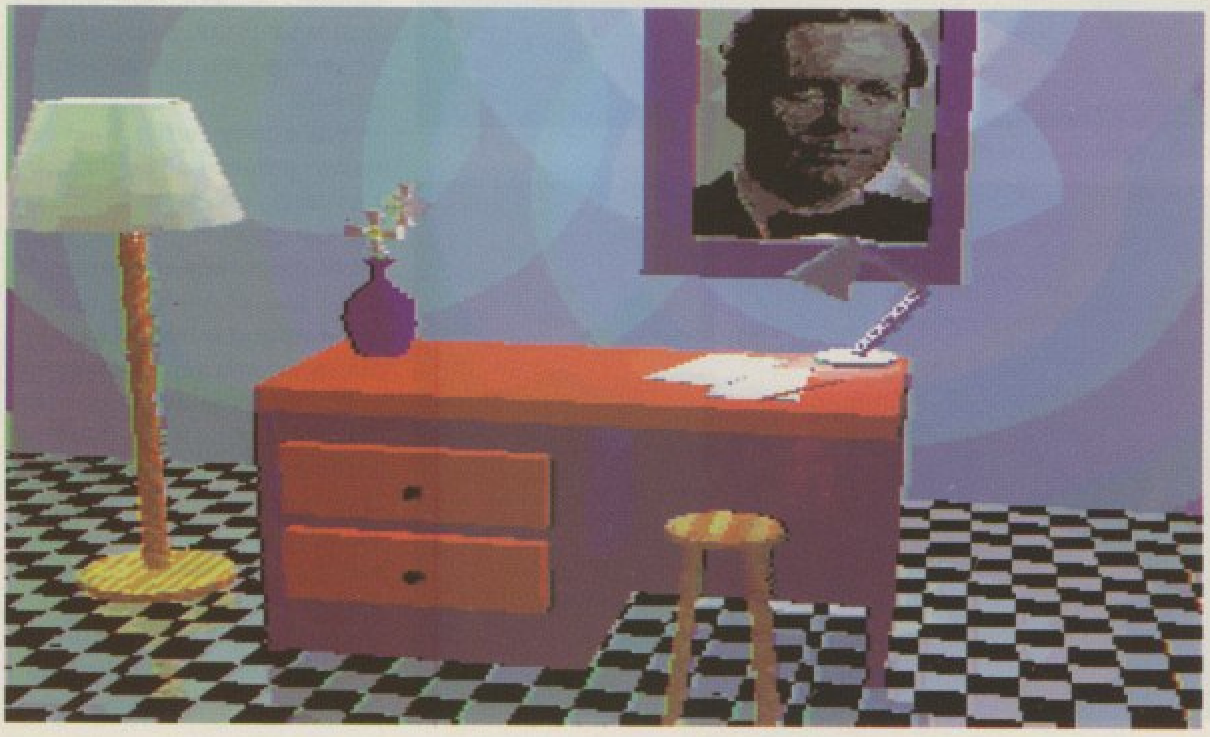
Although light is bent when passing through transparent objects no account is taken for the different frequencies of light.

This means that you rather unfortunately won't be able to recreate the album cover from Dark Side of the moon – a prism will only bend white light in Real3D, it won't split it into a rainbow. Still, it does allow for some very interesting (and realistic) optical effects



A prisoneresque landscape planned (above) and wireframed (below)





Textures

Another feature, which every ray-tracing package but Sculpt seems to have, is the ability to map an IFF image around the surface of an object and so give it an apparent texture.

All varieties of IFFs can be used, from 2-colour to HAM and any size you care to mention. A whole set of different mapping methods opens up a whole range of possibilities. If you were to scan in a map of the world and use a "ball" projection on to a sphere you would have a globe.

These textures can also be used, obviously, to give apparent depth and detail on the surface of an object, where it would be impractical to include this detail by way of adding many small prims.

Wireframe

The wireframe preview mode allows you to take a quick look at the positions of your objects before you commit yourself to a full render. Also in this screen are controls to adjust the apparent perspective of the scene (if you like, the focal length of the lens on the camera you are using to take the picture) and it's magnification.

The wireframe is invaluable, easy to use and so quick, even with many objects to display, that it is scarcely believable. Where it really comes into its own is in the preview of an animation.

A near enough 20 frames per second animation should let you see how the finished article will look.

Rendering

There are many options in the rendering phase. Fast will provide you with a more complete idea of exactly what is going on. By the way, calling it fast isn't that misleading. The time taken for a simple screen is quite astounding.

Some fairly cunning routines are at work which actually make the time taken more predictable. The rendering speed is less dependant on the number of objects or how many light sources there are. The lampless mode will autolight the

area, giving you an idea of what everything is going to look like before you decide on the dramatic lighting effects to use. Unfortunately, since the brightness of the lamps is not adjustable, these effects are quite difficult to obtain.

Lampless mode will also map in any textures used, something that would be left out in fast mode in the interests of speed.

Normal mode will take into account shadows, transparent objects and textures. In fact normal is the highest quality rendering you can get. For really excellent results you can add dithering, shading and turn on interlace mode. Machine parts and metallic sculptures always look better using the greyscale option.

The two remaining render modes are shadowless, which is a bit self-explanatory, and outline, which will do some interesting hidden line removal for you, though quite slowly for some reason.

Backlight control, colour and brightness are selected from a series of sliders. Beneath these are the resolution controls. It is possible to render an image faster by using big chunky blocks instead of pixels, but this is only really useful when used in conjunction with the Box feature.

Real3D will use all of the memory it can get hold of in an effort to speed up rendering. In fact even the beginner version requires at least 1Mb. I have 6.5Mb installed on my system – Real3D is the only software so far that has used over 95 per cent of that!

Boxes

A jolly handy thing is the box. While on the render screen a box can be drawn around any area of the screen. Selecting Fill Box from the pull down menu will render the data only in this box.

This is incredibly useful if, say, you are only changing a detail in one small part of the screen, or for an animation where all the motion occurs in a box which is smaller than the total screen.

It can also be used quite stunningly with the resolution control on the main panel.

Animation

Real3D really excels in the animation department. Spline orbits for the observer, the aim point or for any of the objects can be drawn and the resulting frames will be automatically calculated by the software.

This means that once you have completed your master design for a new house, city or universe, all you have to do is specify a path through it and the software will take care of the rest.

Stroll through the wireframe preview and make a few adjustments and you are ready to render the lot in one batch. On the render master control panel turning off the single option and adding a filename in the box provided means that every frame in the current animation file will be rendered.

Not only that, but it will be saved to the pathname specified as numbered frames. These can then be loaded into the replay facility, or even into a completely different package, since they are plain IFFs.

In reality

Is it worth it? As ray tracing goes, and I've yet to find anyone who makes a full-time living out of ray tracing on the Amiga, this is certainly one of the best packages around at the moment.

If after reading all that you're still not convinced ,work out how many games you could buy with the same money. You think it's a lot? I reckon you'd spend more time creatively designing and enjoying the world of Amiga graphics with this spackage than you would playing twice that number of games.

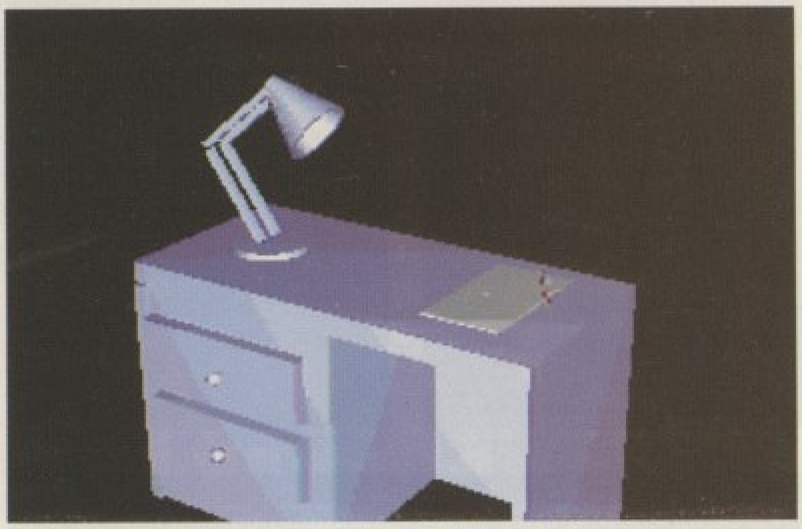
The Sculpt scenario won't happen again. The next version is already underway, with 24-bit colour image support. Ray tracing is becoming the cult scene on the graphics circuit again, with more packages being released across all formats than you could safely wave even a small stick at.

What Real3D may lack in certain aspects of image quality it more than makes up for in speed and ease of use.

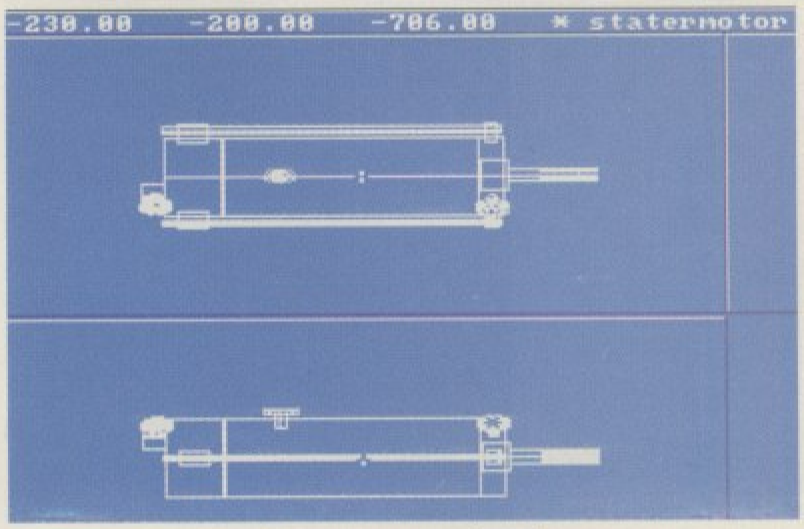
Here, at last, is ray tracing for the masses.



Some wonderful effects can be created with shadows



The desk again, without the wood texture



Reviewed: Real3D Professional
Active software/Amiga Centre Scotland
Tel:031-557 4242

Mugician

State of the art or sleight of hand? Paul Austin pulls the latest music utility out of the hat

HOW often have you muttered "Who writes the music for these things, I could do miles better than that, *if only I had the gear*" while you waited for a game to load?

Well now it's time to put your melody where your mouth is and prove your point with Mugician, a professional standard music package based around good old Paula, the all-singing all-dancing sound chip.

No doubt all the musos out there are just about to flick over to the next page, thinking that anything that is not dedicated to Midi is not worth bothering with .

Fact is, they'd be sadly mistaken – the games and demos scene could do with some new musical ideas, and Mugician could well help meet that challenge.

If, like myself, you are a musician but not a programmer, struggling to bring your great ideas to electronic life, Mugician could be a godsend. With it you work with samples – including your own – which can be manipulated and incorporated into your own programs.

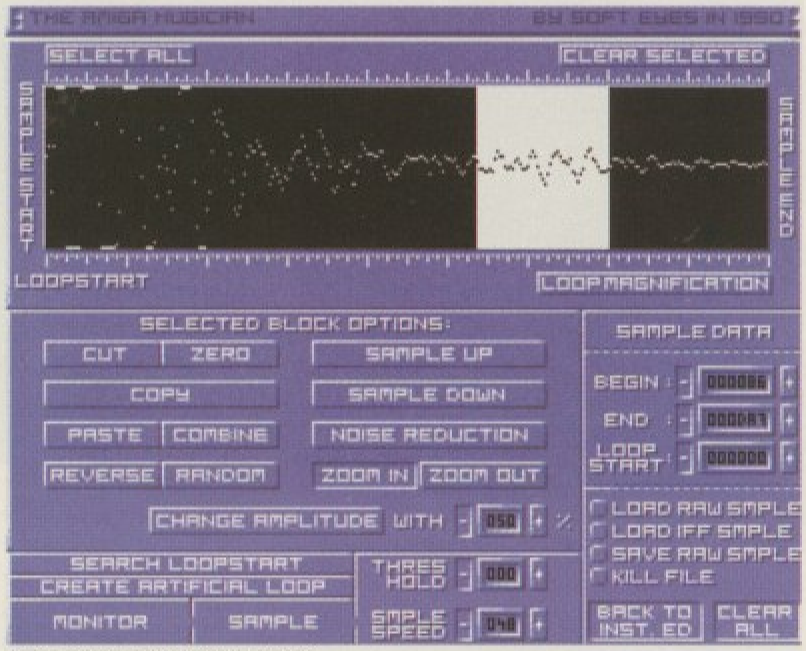
Also featured is simulated synthesis, with which you can create sounds from their component parts, designing your own waveforms and adding various effects. These sounds can consequently be saved for later use.

Making sounds from scratch, even with Mugician's aid, is still a difficult business, and it's a good idea if you are a beginner to use some of the sounds provided until you become more practised. As I mentioned earlier, this is a professional utility and will take a novice a while to master it.

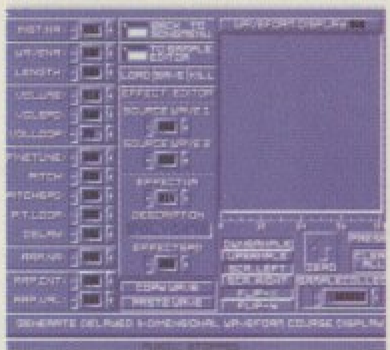
This is what you will be dealing with:

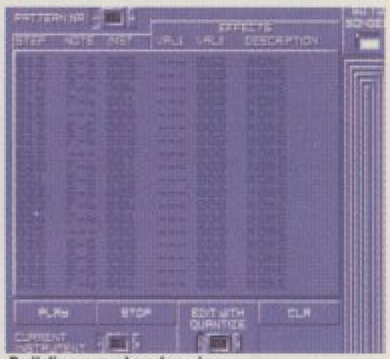
Song Editor: The first screen you will see on loading will probably be the last you will use. This if where all your hard work of creating sounds and consequently patterns is put together into sequences to produce your final four channel masterpiece.

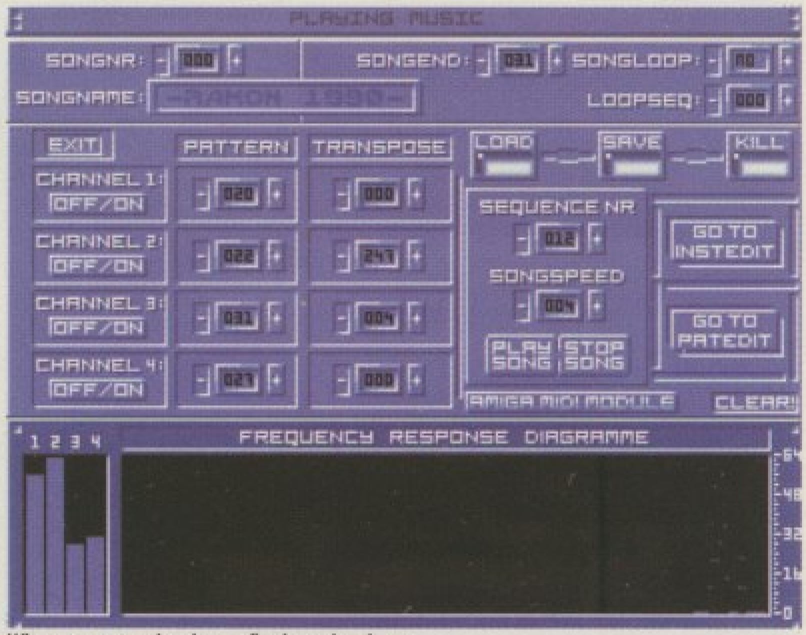
The Instrument Editor: This is where the first 31 of the possible 63 sounds can be produced via synthesis, or in my case blind chance. All the parameters required to design sound are available, plus an effects editor which is excellent for creating weird and wonderful sounds (great for games). The main advantages of using waveforms are their efficient use of memory and, of course, the effects available to manipulate them.



Using the sounds of the real world.


Create your sounds and add the FX.


Building up step by step.



Where you construct your final masterpiece

The Sample Editor: Here is where the other 32 possible instruments can be loaded in sample form. They are held in one large buffer one behind the other, which can then be zoomed in on and various editing functions applied.

Looping is available, plus the ability to load IFF sample files, like those created with *Aegis Audiomaster* or any of the samplers featured in last month's issue.

If you have a parallel type sampler – not a joystick port model – you can use your own samples with the program, which is happy to use samples of various rates and lengths, dependent on available ram.

The Pattern Editor: Once you have amassed the sounds you require it's time to write a classic – and this is where it all starts. Patterns work in step time, each 64 steps long, and up to 255 separate patterns can be edited for use in each song. The finished patterns can then be formed into songs in the song editor.

The manual suggests that you should read it at least three times. This is very good advice – take it! Each of the above sections could warrant a small novel in itself.

A more detailed review of the program features would have left both of us a good deal older and you probably none the wiser. The best way to learn with a program like this is by experimenting.

The manual also offers a Programmer's Corner which contains some assembler routines so your songs can be used independently of Mugician, for instance in games, demos, and so on. Basic Midi functions are available but external keyboards are not essential.

Without doubt Mugician was produced more with the programmer in mind than the performance musician. There are quite a few PD packages for this area of tune composing, but this package has a more professional feel to it. The remarkably useful synthesis facility is something you will not find in any of the Soundtraker clones.

The Digital Mugician
Softeyes (0734) 817261
£29.99

This may not be one for a beginner, but for a serious user who wants a all purpose music and FX package, it could be ideal.

amiga

alamanac

Books, bugs and an easy way to create your own tunes. Amiga Computing's resident guru Jolyon Ralph continues to investigate everything 68k

MACHINE CODE

A friend of mine phoned me a couple of weeks back to rave about a new book, "Mapping the Amiga" published by Compute! books. He said that since getting it he has not needed to touch his collection of Abacus and Addison-Wesley reference books.

Could the vastly expensive and several thousand pages worth of Amiga programming manuals really be condensed into one £20.95 book? This was one I had to check out.

Scanning through the book reveals short – half page on average – descriptions of all library calls, all system structures (ExecBase for example), and every hardware register, including all the fiddly CIA registers that no one can remember properly.

•How does it cram all of this into 446 pages you may be asking? Well, it is basically a reference book. It is not intended as an introduction to Amiga programming.

Although it does include an introductory section on how to use library calls in Assembler, C and Modula 2, this is only 12 pages long.

There are explanations of how things like Copperlists, the blitter, sprites, etc. work hidden throughout the book, but they are arranged in order of hardware registers, not in an order that beginners could work through easily.

The outcome is that the book is very sensibly arranged for people who already know the Amiga well. The long explanations of the blitter, and so on are ideal 'memory fresheners', but I'd recommend another book, either the Amiga Hardware Reference Manual (Addison-Wesley) or The Amiga System Programmers Guide (Abacus) for people new to Amiga programming.

For experienced coders the book is brilliant. Every hardware register is documented in order. No more looking up what $dff016 is in a table, looking that up in the index and then reading about what it does. Just scan through the book for $dff016 and the information is there at your fingertips.

With library calls things are even easier. Before you would have to look up a routine through several different tables, then finding out it is a Dos library call which is in a different book by a different publisher! All library calls and structures are listed alphabetically.

I have several times in the past given up with the old manuals when trying to find something like the RastPort structure information. With this book I found it in seconds.

The hardware registers are excellently documented, the Library and Device calls are well covered, but a book of this size could not hold all the information there is about all these different calls, so you may still find the official reference guides are useful.

In conclusion the book is brilliant. I don't know how I ever survived without it now. Not the best thing out for beginners, but if you've mastered the basics and need a decent reference, this beats the Amiga System Programmers Guide hands down. And it's £12 cheaper too!

Danger UXB

Something not so wonderful may be happening in the not too distant future. Remember all the scare stories of Amiga viruses living in battery-backed clocks? Remember rumours of viruses that could destroy your Amiga?

Now, with the aid of the new ECS chipset on the very latest Amigas – currently only fitted to the 3000, but available soon for all Amigas – it is possible for a virus to blow up your monitor!

I'm not going to tell you exactly how to do it in this column, that would be stupid, but the new Denise chip has to do some special tricks to be able to produce the new video modes, and if you fiddle with these you could send signals to your monitor that could damage it.

What if you write a program that crashes and just happens to write to the wrong hardware register? Just make sure your code keeps clear of any register above $dff1bf.

The 68000 is a fast processor, in fact compared to similar speed chips found in PC clones, it's very fast. Not as speedy as a RISC chip (extremely fast), but you can't have everything. Still, there's more than one way to skin a cat, and there's n point using a fast processor and programming in machine code if your routines are not as fast as they could be.

The obvious way to do something is not necessarily the quickest. For example, to clear a data register – d0 for example_ the instruction CLR.L D0 may be the obvious choice to many of you. However, that takes six clock cycles, and the less-obvious MOVEQ.L #0,D0 only takes four cycles.

There are several of these single-instruction level substitutions you can use to speed up you code, but that's only part of the story. Take the following routine, to move a block of memory 1000 bytes long from memory pointed to by a0 to memory pointed to by a1:

```
        move.l #0,d0
loop:   move.b (a0),d1
        move.b d1,(a1)
        add.l #1,a0
        add.l #1,a1
        add.l #1,d0
        cmp.l #1000,d0
        bne loop
```

Now, I've gone over the top with that routine. No one with any knowledge of 68000 would write a routine as bad as this, but the important point is that the above routine works. It is perfectly valid 68000 code.

Let's try optimising this routine. Firstly, look at the four lines after the LOOP: command. They can be replaced with a single line :

```
move.b (a0)+,(a1)+
```

Now look at the rest, the first and the last three lines. They can be replaced by a DBRA loop,

MACHINE CODE



So our final code is;

```
move.l #999,d0    ; DBRA loops for D0+1
                    times.
move.b (a0)+,(a1)+
dbra   d0,loop
```

Isn't that a lot simpler? And faster. Ignoring the loop, the original code would take 64 clock cycles per byte transferred, the new version only 12. This is a good example of how to speed a routine up by recoding with faster equivelant commands.

However, the method is still the same, take a byte at a time and stick it into the next address. The next level of optimisation depends on rethinking the whole approach to the problem. Why move a byte at a time when you can move four?

```
        move.l #249,d0   ; 250loops  250 x
                           4 = 1000)
loop:   move.l (a0)+,(a1)+
        dbra   d0,loop
```

Now, the move.l (a0)+,(a1)+ in this takes 20 clock cycles, you have to add on 10 bytes for the loop, but as you are only calling it 250 times instead of 1000, it is much faster (7500 cycles compared to 22,000 cycles for our improved byte transfer routine, or 88,000 cycles for the original routine!).

This gets block moving down to 7.5 cycles per byte. There is a faster way, 250 lines of move.l (a0)+,(a1)+. This is a bit daft for memory reasons, but if you really need the speed, it shifts at five cycles per byte. You can improve the performance of the routine by putting more than one move.l in the loop, for example:.

```
        move.l #124,d0    ; 125 loops (125
                            x 8 = 1000)
loop:   move.l (a0)+,(a1)+
        move.l (a0)+,(a1)+
        dbra  d0,loop
```

I'm not saying this is necessarily the fastest way to do it, in fact I'd love to see a faster routine (68000 only, no cheating with the blitter please!).

If you want to share your fast routines, be they block moving or anything else, send them to me. Got a fast multiply or divide routine? Have you sussed hex to decimal conversion? No doubt I'll cobble together some form of prize for the fastest routines in various categories

Rip it up and start again

Have you ever loaded up a demo and thought "I like that music, wish I could rip it". Have you tried one of the public domain music rippers with only limited success? The reason is that most demos clear the memory on exit, or the module is immediately overwritten in memory by something else loaded in, quite often the music ripper.

Now, the Action Replay cartridge from Datel doesn't find Soundtracker modules for you, but with its help you can hunt down and rip the tunes with ease.

For this trick, you will need one Amiga 500 or 1000 with at least 1Mb of memory, 1an Action Replay cartridge, a blank formatted disk, a sensible version of Soundtracker (Pro-tracker, or Noisetracker V1.1 or above) and a decent soundtracker ripper (the latest Fraxion ripper, for example) or Rossi's public domain Amiga-Mon, or preferably both.

Power up your Amiga, and when it prompts you for a disk press the Action Replay button. From the Action Replay screen press F9, if necessary, to get rid of the German keymap. Then type ZF0 to disable your fast memory. ZV0 to disable virus testing and ZM0,to disable cleaning ram on reset.

Reset your Amiga again – this is important, it disables the fast memory – and boot the disk with the tune you wish to rip. Wait until the tune is playing then press the magic button.

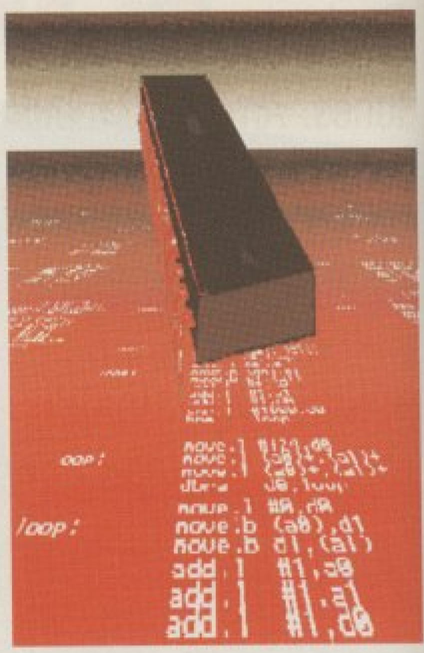
Now – and this is the clever bit – type LORD OLAF on the cartridge screen, and it will inform you that Sysop mode has been activated. This will allow you to read and write to any area of memory, including the previously protected cartridge ram, and our disabled fast memory. You can even disassemble the cartridge.

What we can now do is copy the entire contents of chip memory, including the module, into fast memory, which, as it has been disabled, cannot be overwritten by a soft reset, or by loading other software in. This is done by typing:

```
l 0 7ffff c00000
```

(assuming your fast memory lies at $c00000, as all A501 compatibles do). Now reset again and load your music ripper. Tell it to hunt in fast memory, and with any luck it should find your module.

If you haven't got a ripper, or it can't find it, you have to resort to the manual approach to hacking modules. Using either the Action Replay monitor itself, or better still, Amiga Mon, the public domain monitor, hunt for the string M.K. (M dot K dot) in memory. This stands for Mahoney & Kaktus, the authors of Noisetracker, and all Noisetracker modules (95per cent of demos use Noisetracker modules) carry this stamp.



Code is the way to the heart of the machine

This is near the beginning of the module. Hunt backwards in memory from this point and you will see the names of all the instruments (for example ST-04:boringbassdrum) and at the beginning the name of the song.

Starting from the first character of the name of the song, save out a large block of memory to disk. 300k is usually enough. Call it mod.something, so you can load it into Noisetracker. If you've used the cartridge monitor to save this file out, you will have to FDOStoDOS convert it first.

Now, reset the cartridge and the Amiga back to their default settings. The quickest way is to power off your Amiga for 10 seconds and power it up again. Load up your Noisetracker Protracker and load in the module you saved. Save it back t disk again immediately, and it will save it as the proper size.

Play the module. If it works, you've successfully ripped the module. If not, try again. I must thank Alex Slater for his help in preparing this ripping yarn, and he hasn't even got a cartridge! (Ahem Datel?)

Jot to Jolyon

Have you got a problem with your sprite routine? Is your assembler giving you grief? Are you fiddling with the wrong bits in $dff040? Or have you written some mind-shatteringly fast routine to calculate the average airspeed of an unladen African swallow to 20 decimal places?

If so, write to: Jolyon Ralph, c/o. Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP. or if you're a really hi-tech guy, send me electronic mail on CIX (jralph@cix) or on the CABBS or Yukon Hol Bulletin Boards (see COMMS listing)

CUMANA HAS THE DISK DRIVE TO SUIT YOUR AMIGA, AS WELL AS YOUR POCKET



The Cumana Pedigree Includes

CAX 354

3½", SLIM 25mm DRIVE UNIT
FORMATTED CAPACITY 880K
AMIGADOS COMPATIBLE
DAISY CHAIN CONNECTOR
DATA ENABLE/DISABLE SWITCH
LOW POWER CONSUMPTION
QUIET, HIGH SPEED ACCESS
ACTIVE INDICATOR
DATA LEAD

CAX1000S

5¼", SLIM 42mm DRIVE UNIT
FORMATTED CAPACITY 360/880K
AMIGADOS & MS-DOS COMPATIBLE
DAISY CHAIN CONNECTOR
DATA ENABLE/DISABLE SWITCH
LOW POWER CONSUMPTION
QUIET, HIGH SPEED ACCESS
ACTIVE INDICATOR
DATA LEAD
40/80 TRACK SWITCH

Designed and manufactured in the UK to the highest standards, all Cumana disk drives include 12 months warranty and are available from area distributors and a national dealer network.

Look out for the distinctive packaging in your high street, today!

CUMANA
The best name in memory

CUMANA LIMITED, THE PINES TRADING ESTATE, BROAD STREET, GUILDFORD, SURREY GU3 3BH TEL: GUILDFORD (0483) 503121

Paul Holmes takes the wrapping off a sampled sound file to see what's inside. If you want to hear what he is on about, check this month's Amiga Computing cover disk

CODE CLINIC

WE stopped our look at IFF rather abruptly last month, just before we got to a rather exciting bit on SMUS chunks. So let's rejoin the action.

A SMUS chunk has seven standard chunk types – SHDR, NAME, Copyright ("(c) "), AUTH, ANNO, INS1 and TRAK. It may also contain embedded instrument forms – hopefully 8SVX, but they don't have to be. Descriptions of SMUS standard chunks can be found in the Exec manual App.B pp.53-62, and are not given here.

NAME, Copyright, AUTH and ANNO are treated as text, as in 8SVX.

The SHDR format is just like VHDR, in that it is case-insensitive, but fussy about order.

```
53484452    00000004    397C7001
SHDR....9|p.
```

appears as:

```
SHDR |  ;size=4
tempo 14716
volume 112
tracks 1
|
```

INS1 chunks come in three flavours _name(type 0), MIDI(type 1), and general type. The last of these is unlikely to be used, and if so I've no idea what for, but it's provided for flexibility.

```
494E5331 0000000F 01000000 46656E64
INS1........                   Fend
65725374 72617400            erStrat.
494E5331  00000004  05010307
INS1..
```

and :

```
494E5331  00000004  040940FF
INS1......
```

are equivalent to:

```
INS1 |  ;size=15
register 1
name "FenderStrat"
|
INS1 |  ;size=4
register 5
MIDI
channel 3
preset 7
|
```

and :

```
INS1 |  ;size=4
register 4
TYPE 9
data1 64
data2 255
|
```

Note that the zero on the end of "FenderStrat" is just a padding byte, not a terminating zero, as the length of the string (9) is just the chunk size (15) minus 4.

All three INS1 formats are order critical. Mnemonics like "name" or "preset" are case insensitive, but the contents of strings like "FenderStrat" will be copied with case information preserved, as this is likely to be demanded by application packages.

TRAK chunks are the most complicated, and their format reflects this. Each event has its own mnemonic.

```
inst 2       use the instrument in register 2.
time 3/4     use 3/4 time in score.
keys Db      use D flat key signature in score.
volume 127   full volume. Figure may be
0..127
midichn 5    set MIDI channel 5
midipre 34   set MIDI preset 34
```

As the above are events, not fields in a data structure, they may appear in any order, and any number of times throughout the track. Not all music packages will accept a keychange mid-score, but there's no law against it.

Notes and rests have the format:

<notespec> ("c") ("t") (<tuple>) ("d") "/" <value>

where :

<notespec> = (<note><octave>) | "rest"
<note> = "C" | "C#" | "D" | "D#" | "E" | "F" | ... | "B" |
<octave>= "_" | "0" | "1" | ... | "9" |
"c" means the note is chorded.
"t" means the note is tied.
<tuple> = ":3" | ":5" | ":7" (for triplets and so on)
<value> = "1" | "2" | "4" | "8" | ... | "128" | (2=minim, 8=quaver, et al)
"rest/4" means a crotchet rest.
"C#5:3/8" means C#, octave 5, quaver, part of triplet, so 2/3 normal length.
"F2d/4" means F, octave 2, dotted crotchet.

Note that flats are not yet supported (they soon will be), and that most applications (for example Sonix) will use octaves 2 to 7. A1=55Hz, A4=440Hz, A7=3520Hz.

Samples

Samples are stored in an IFF file called "8SVX" which stands for 8-bit Sampled Voice. It can be used for two different jobs – a one-shot sound effect or a musical instrument. Let's look inside an 8SVX, to see how it does it.

Every FORM 8SVX contains at least two chunks – VHDR and BODY. The last is the chunk which holds the sampled waveform values, and it's probably quite large. A 3-second sound effect, sampled at 12kHz will use almost 36k. The VHDR chunk, on the other hand, is tiny. Just 28 fun-packed bytes, laid out like this:

```
56484452 00000014 00008CC4
00000000                VHDR ...
00000000 2EEB0100 00010000
```

which translates into:

```
VHDR |            ;size=20
neShot 36036      ;(4 bytes)
repeat 0          ;(4)
PerHi  0          ;(4)
PerSec 12012      ;(2)
octaves 1         ;(1)
comp   0          ;(1)
volume 65536      ;(4)
|
```

This means that the size of the sample – that is the data size of the body chunk – is equal to oneShot+repeat = 36036 bytes. A repeat value of zero means that this is a one-shot sound.

PerSec is the number of samples to play back each second. PerHi and octaves are used for musical instruments – more on these later.

A value of 0 in the comp field means that no compression is being used. Last time I checked, the only other value reserved for this field was 1, meaning Fibonacci-delta encoding.

If you have your own compression method, put another number into this field, to identify the compression method you have used. Ideally, get in touch with Commodore to register your number, so that compression method number 27 (or whatever) means the same to you as it does to everyone else.

Bear in mind that the one-shot+repeat = the number of samples *after* any decompression, so it's only the same as the data size of the body chunk if the sample is uncompressed (they usually are.)

Finally volume, ranging from 0 to 0x10000 (65536) and not 0xFFFF, strangely enough, for full volume. Zero is for silence.

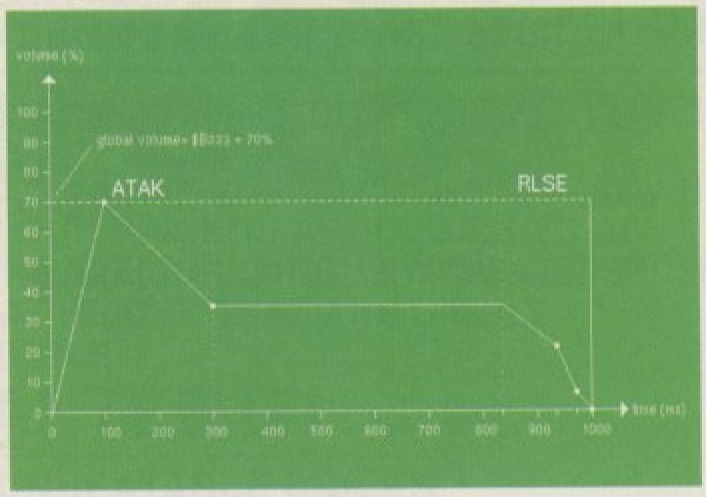
Here's a thing – why is the playback rate 12012Hz, not 12,000? I'll tell you. The audio chip has a clock rate of 3,579,546 cycles per second (on a PAL A500 – don't assume it will always be this). The rate at which it plays back a sound is calculated as one sample per N clock cycles. The period is calculated as :

int(3579546/ideal frequency)=298 cycles.

The actual playback rate will then be 3579546/298, or 12011.899Hz. This is the closest approximation you can get to 12kHz. No worries – it's only out by 0.1%, so no one can tell the difference.

Musical instruments are rather more complicated than one-off effects. Sample lengths are the first problem. What if a piece of music calls for a very long note, say a whole note in a smoochy slow number. Must we store a huge sample of the instrument to allow for this possibility?

Thankfully no. What we can do instead is store a one-shot part which is used at the start of the note, and a repeat part which is played over and over again until the end of the note. If the values were one-shot=35036, and repeat=1000, then a play-back routine should play the first 35036 bytes once, then repeat the last 1000 bytes until told to stop.



ATAK and RISE define the waveform volume envelope

The repeat part must contain an integral number of waveform cycles – if not you'll get a loud click at the end of each repeat.

Frequencies can also be a problem. For one thing, the playback rate is not fixed – it has to be altered in order to generate different notes. Also, many musical instruments cover a wide range of octaves.

To go up to a frequency much higher than that at which the instrument was sampled would push the audio DMA down to a very low period.

Firstly, you can't have one sample in less than 124 clock cycles. This would give the hardware insufficient time to fetch data from memory.

Secondly, frequencies are less accurate as they get higher. The nearest approximation to 28kHz is 28185Hz, out by 0.66%, starting to get noticeable.

To get by these limitations, the instrument can be sampled at several different octaves. The "octaves" field in VHDR is set to the number of octaves used. The BODY chunk starts with the instrument samples at the highest octave. The "oneShot" field contains the number of bytes in the one-shot part of the *highest octave*. The "repeat" field does the same for the repeat part, so together they add up to the total length of the highest octave.

Next in the body chunk is the next octave down, which is exactly twice as long as the first octave, as each octave is twice as long as the one before it.

Finally, the "perHi" field is used to say how many samples there are per waveform cycle in the highest octave. The "perSec" field is ignored.

An 8SVX form must have a VHDR and a BODY – these are *required* chunks, but it can also have *optional standard* chunks. And like any IFF FORM, it can contain *non-standard* chunks too. (Look back at November's Code Clinic for a reminder of what these terms mean.) Your program must skip over any chunks it doesn't recognise, not just guru out. If it does that's *your* fault.

Three common property chunks are "NAME", "(c) ", and "AUTH", which are text chunks used to hold the name of a FORM, its copyright details and the name of the author. Because they are property chunks, each type should appear at most once.

There may also be one or more "ANNO" data chunks, holding text annotations typed in by the author. Frankly, ANNO is very rare in 8SVX files, but you could well see them in other FORM types.

Finally, let's have a look at the envelope chunks, ATAK and RLSE. These are used to change volume factors as a sample is replayed. (By volume factor, I mean that each point is a multiplier of the global volume given in the VHDR chunk.) Each envelope chunk contains one or more 'EGPoints'. Here's an example:

```
4154414B 0000000C 00640001 000000C8
ATAK............ 00008000          ....
```

This means:

"Start the volume at zero, then over the course of 100 ($64) milliseconds slide it up linearly to 100% of the global volume ($00010000). Next, over the course of 200 ($C8) milliseconds slide it down to half the global volume ($00008000)".

You know that it has two points, because an EGPoint is always six bytes, and this chunk has a data size of 12.

The RLSE chunk does the same at the end of the sample, so if it has, say, three points of 100, 40 and 30 milliseconds, you should start to execute it 170 milliseconds before the sample is due to end.

●Next month we deal with musical SMUS files, which use 8SVX samples as instruments.

PROTON SOFTWARE

Tel: 0462 686977 24 Hour. Fax: 0462 673227

Access — VISA

SPECIAL OFFER BUBBLE + £9.99	CALL NOW AND PLACE YOUR ORDER	PRODUCTS IN STOCK SENT SAME DAY	NEW RELEASES SENT ON DAY OF RELEASE	SPECIAL OFFER MANCHESTER UTD £12.99

AMIGA

- 688 Attack Sub £16.99
- Amos £35.00
- Ant ago £13.99
- Ant Heads £9.99
- Atomic £12.99
- Back To The Future £16.99
- Back To The Future 2 .... £16.99
- Badlands £16.99
- Balance of Power £19.90
- Battle Chess £16.99
- Battle Ships £9.99
- Battlemaster £19.99
- Betrayal £16.99
- Black Tiger £16.99
- Block Out £13.99
- Blood Money £16.99
- Bloodwych £16.99
- Bloodwych Data Disc £11.99
- Bomber £16.99
- Breach 2 .... £16.99
- BSS Jane Seymour £16.99
- Budokan £22.99
- Cadever £16.99
- Captive £16.99
- Castle Master £16.99
- Champions of Krynn £19.99
- Chaos Strikes Back £16.99
- Chase HQ £16.99
- Cheetah 125 + Joystick £8.99
- Chess Champions 2175 .... £17.99
- Chronoquest II £22.99
- Codename Iceman £19.99
- Colonels Bequest £29.99
- Combo Racer £16.99
- Corporation £15.99
- Cyberball £12.99
- Damocles £15.99
- Dan Dare 3 .... £16.99
- Days of Thunder £24.99

AMIGA

- Debut £14.99
- Double Dragon II £16.99
- Dragon Flight £19.99
- Dragons Breath ... £22.99, £23.99
- Dragons Flight £24.99
- Dragon Wars £16.99
- Dungeon Master (1 meg) £22.99
- ECO Phantoms £16.99
- Elite £16.99
- Escape From Hell £17.99
- European Super League £13.99
- F16 Combat Pilot £14.99
- F19 Stealth Fighter £24.99
- F29 .... £16.99
- Falcon £16.99
- Fiendish Freddy £16.99
- Fire and Brimstone £19.99
- Flight Sim II £28.99
- Flimbo's Quest £16.99
- Flood £16.99
- Football Manager II £13.99
- Fun School 3 .... £16.99
- Future Basketball £16.99
- Ghostbusters II £16.99
- Ghosts n Goblins £16.99
- Ghouls & Ghosts £16.99
- Giants £23.99
- Grandslam Tennis £16.99
- Gunship £16.99
- Hard Drivin £13.99
- Harley Davidson £16.99
- Helter Skelter £13.99
- Heroes £19.99
- Hound of Shadow £17.99
- Hunt for Red October £19.99
- Iceman £16.99
- Immortal £16.99
- Impossamole £16.99
- Indy Jones (the advert) £22.99

AMIGA

- Indy Jones (the arcade) £16.99
- Infestation £16.99
- Int. Soccer Chall £16.99
- Intact £12.99
- International Championship Wrestling £16.99
- International 3D Tennis £16.99
- Italy 90 .... £16.99
- Ivanhoe £17.99
- Jack Nicklaus Golf £16.99
- Judge Dread £13.99
- Kick Off II £13.99
- Kings Quest Triple £19.99
- Klax £12.99
- Knights of Legend £19.99
- Knights of the Christalion £22.99
- Laser Squad £12.99
- Last Ninja II £16.99
- Leisure Suit Larry II £26.99
- Leisure Suit Larry III £27.99
- LHX Attack Chopper £34.99
- Life and Death £19.99
- Loom £16.99
- Lords of Chaos £16.99
- Lost Patrol £16.99
- Mad Professor Mariarti £12.99
- Magic Fly .... £POA
- Man Utd £12.99
- Mavis Beacon Typing £19.99
- Microprose Soccer £16.99
- Midnight Resistance £16.99
- Midwinter £22.99
- Monty Python £13.99
- Murder £16.99
- Navigator + Auto £8.99
- New York Warriors £13.99
- Neuromancer £16.99
- Nitro .... £P.O.A.
- North and South £16.99

AMIGA

- Nuclear War £16.99
- Operation Harrier .... £POA
- Operation Stealth £16.99
- Operation Thunderbolt £16.99
- Oriental Games £19.99
- Photon Paint II £19.99
- Pipemania £16.99
- Pirates £16.99
- Planet of Robot Monsters £16.99
- Plaque £19.99
- Player Manager £16.99
- Populus £16.99
- Powerboat £16.99
- Powerdrome £16.99
- Powermonger £19.99
- Premier Coll III £19.99
- Pro Tennis Tour £16.99
- R.A.C. Rally £16.99
- Rainbow Islands £16.99
- Red Storm Rising £16.99
- Rick Dangerous II £16.99
- Rotor £13.99
- Rotox £16.99
- Rourkes Drift £16.99
- RVF Honda £14.99

AMIGA

- Saint Dragon £16.99
- Shadow Of The Beast £17.99
- Shadow Of The Beast 2 .... £24.99
- Shadow Warriors £16.99
- Sim City £16.99
- Simulcra £16.99
- Space Ace £28.99
- Space Quest III £29.99
- Speedball £19.99
- Speedball II .... £POA
- Street Hockey .... £POA
- Stunrunner £16.99
- Subbuteo £13.99
- Super Cars £14.99
- Supremacy £13.99
- Team Yankee £19.99
- The Cyclos £16.99
- The Killing Game Show .... £POA
- The Spy Who Loved Me £13.99
- Theme Park Mystery £16.99
- Thunderstrike £16.99
- Tie Break £16.99
- Time £16.99
- Time Machine .... £POA
- Tower of Babel £23.99

AMIGA

- Treasure Trap £16.99
- Triad 3 .... £22.99
- Turn It £13.99
- Turrican £16.99
- TV Sports Basketball £22.99
- TV Sports Football £22.99
- Ultimate Golf £16.99
- UN Squadron .... £POA
- Vaxine £16.99
- Viking Child £16.99
- Wayne Gretzky £17.99
- Web of Terror £13.99
- Welltris £16.99
- Wheels of Fire £19.99
- Wings £19.99
- Wings of Fury £16.99
- Wipe Out £16.99
- World Cup 90 .... £16.99
- World Cup Compilation £16.99
- World Cup Soccer £14.99
- Wrath of the Demon .... P.O.A.
- Xenomorph £14.99
- Xenon II £16.99

If the product you're looking for is not here give us a call. 1000's more titles in stock. Orders under £10.00, please add 50p per item p&p. Products in stock usually sent same day.

PRODUCT	FORMAT	COST
TOTAL		

PO/Cheques payable to: PROTON SOFTWARE. *New releases sent on day of release.*

NAME ....

ADDRESS ....

....

Send to: **PROTON SOFTWARE (AMC),** ENTERPRISE HOUSE, BLACKHORSE ROAD, LETCHWORTH, HERTS SG6 1HL. Tel: (0462) 686977. Fax: (0462) 673227

Access — VISA

ASHCOM

0530 411485 — 0530 411485

YOU NEED 512K NOW HOW MUCH WILL YOU NEED TOMORROW?

THE NEW ASHCOM RAM EXPANSION IS EXPANDABLE TO **1.8Mb**

GIVING YOU 2.3Mb OF AUTOCONFIGURE SYSTEM RAM

8372A FATTER AGNUS £59.00

1.3 KICKSTART ROM £28.00

FEATURES:

- ★ Real Time clock/calendar with high capacity Nicad battery backup
- ★ Memory disable switch
- ★ Low power consumption
- ★ Buffered Data Bus (Essential for high capacity Ram boards)
- ★ Plugs in as A501 NO SOLDERING!!!
- ★ 12 Months warranty
- ★ Configures to 1 Mb chip ram when FATTER AGNUS is enabled
- ★ Works with 1.2 and 1.3 kick start

All prices include VAT and delivery.

ONLY £59.95 for 512K version.

Expander Board £15.95.

Expanded to 1Mb £99.95

Expanded to 1.5Mb £128.95

Fully expanded to 1.8Mb only £154.95

ASHCOM 512K RAM EXPANSION WITH REAL TIME CLOCK/CALENDAR AND DISABLE SWITCH

ONLY £39.50

WITHOUT CLOCK £34.50

Gives 1Mb chip RAM with Fatter Agnus

Rams only £30 per 512K

NEW NEW NEW NEW NEW NEW NEW

BOOT SELECTOR WITH ANTI CLICK ONLY £19.95

Selects DFO or DFI as boot drive and eliminates that annoying click when drive is empty.
Easy to fit - just plug in!!

READ THIS

FREE REGISTRATION WITH THE ASHCOM USER CLUB

Fill in the coupon below to register with the Ashcom User Club and receive exclusive information on new Ashcom products. With each free mailshot you will receive a massive 10% discount voucher.

10% discount off any order received with registration. No more endless sifting through adverts for a good deal.

Name ______________________

Address ______________________

____

______________ Postcode ______________

No obligation to order when registering

Only from ASHCOM, 10 The Green, Ashby-De-La-Zouch, Leicestershire, LE6 5JU

MON-FRI 9.30-5.30 SAT 9.30-4.00 **Telephone: (0530) 411485 Fax: (0530) 414433**

MUSIC

Jason Holborn prises himself away from his keyboards to keep you in tune with the latest news and gossip from the Amiga music scene

Deluxe Music deluxe?

The gossip channels have been buzzing recently with rumours that Electronic Arts are hard at work producing a major upgrade to Deluxe Music to bring it in line with current developments.

According to EA's own Sarah Shrapnell, because the Deluxe packages were designed as in-house development tools, they are in constant development. As soon as EA feel that they have a sufficiently enhanced version, it will be sold as an upgrade.

Sarah went on to say that even if an upgrade was to arrive, it certainly wouldn't be available for at least another three months. Version 1 of Deluxe Music became obsolete years ago, so it would be in EA's interests to do something about it.

Doin' the Doo with MusicX

After years of rejection, it seems that the Amiga is finally starting to make its mark in the music industry. Among those now using it is Betty Boo, whose hits include *Where are you baby?* and *Doin' the Dool*.

According to Microillusions, Betty is using an Amiga running their sequencer system, MusicX, to produce all of her latest chart hits, including much of her new album *Boo-Mania*. Although Betty was unavailable for interview, it is believed that she is a great fan of the Amiga.



Betty Boo; Another devotee

Betty joins other big names such as Cortney Pine, Jan Hammer and Prince, all devotee users of the Amiga for musical purposes.

All patched up

Sound Quest Inc, the Ontario-based company who produce a range of synth patch editors for the Amiga, have released Midi Quest, a universal editor/librarian. The program comes with configurable Midi drivers, integrated graphic editing and multi-instrument filing capabilities.

The program allows you to manipulate synth patch files (sound data files) created by Sound Quest products on both the Amiga and other computer systems. They can be edited to create new banks of sounds by cutting, pasting, mixing and blending patches from other banks.

Music eXtra

It's finally here! MusicX 1.1 has arrived, and already there's talk of even more upgrades in the pipeline before the big one arrives – Music-X 2.0. This latest release has been floating round a number of UK and US recording studios for several months now, but at last it's available to Joe Public.

The first thing you'll notice about it is the fact that it no longer works on a 512k Amiga. OK, you can load the thing in, but don't expect to be able to use it – all you get is loads of "Out of memory" requesters every time you try to do anything.

When you first load it up, things look virtually identical, but that's not to say MusicX 1.1 is nothing more than a few fixed bugs. No siree, Microillusions have included many new features to further enhance what is generally regarded as the Amiga number 1.

The really good news about this new release is its price – MusicX 1.0 would have set you back £230, but MusicX 1.1 has been launched at £150. Existing users can upgrade from 1.0 to 1.1 for just £20. Give Microillusions a call on 0480 496497 for more info.

New MusicX features

Multi-serial capabilities: MusicX can now talk to up to eight serial ports simultaneously (using a serial port expansion card such as that available from ASDG, Inc.) in both directions, which allows it to address a theoretical 128 Midi channels simultaneously.

Event sculpting: Just like Passport's *Master Tracks Pro*, you can now sculpt note velocities, continuous controller values, aftertouch, pitch bend and so on using the mouse.

Drag the mouse across the bar editor screen and MusicX will redraw a continuous series of controller events to conform to the mouse's path.

View controllers: You can now choose to display one type of controller at a time, or all controllers simultaneously.

Velocity flattener: This works just like the MusicX velocity scaler, except that it sets the velocity to a constant value which can be ramped or randomised.

Lock channels: It is now possible to lock the current Midi channel from within the bar editor, which makes it easier to selectively edit data for a particular channel from within a multi-channel sequence. This is a bit like a musical equivalent of DPaint's stencil function.

Sample tuning and envelope editor: Sample envelopes and tuning can be edited in real-time while sequences are playing.

Play sequence events: MusicX will now automatically stretch a play sequence event to the full length of the sequence that it is to trigger

Budget showdown

This month we start a two part com-

MUSIC

parison of MicroIllusions' MusicX Junior and Passport's Trax sequencer. Both are competitively priced, but which is best for you? Let's start with a look at the most recent arrival, Trax.

This is being distributed in the UK by MCM (071-724 4104)..

America software house.Passport have never until now been particularly active on the Amiga. In fact, until quite recently the only thing they had to offer Amiga owners was *Master Tracks Pro*, a professional sequencer with a price tag to match.

Now, after almost a year, Passport have finally released Trax, which is substantially a cut down version of Master Tracks offering the same Mac-like user interface, with powerful editing and composition facilities.

Trax basics

Trax offers 64 tracks of realtime recording which can contain up to 16 channels of Midi data. It uses the same tape transport-type controls used on just about every other sequencer. Just select the track you wish to record to, click on the Return button and start playing. Trax then does the rest.

Once a sequence has been recorded you can set both the channel which the track is to be played on and the synth program number it is to be played with. For rhythm parts, you can loop tracks simply by clicking on the loop gadget for that particular track – which is much simpler than the MusicX approach.

All the rest of the track operations - delete track, copy track and so forth – are pretty standard and are selected from the pull down menus. Surprisingly, if you wish to extract particular Midi events this has to be carried out from within Trax's sequence editor.
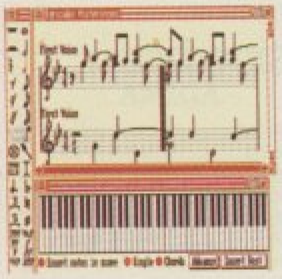
Sequence editing

Editing of sequences is carried out from a MusicX-like Step Editor which displays notes as horizontal bars, their varying lengths denoting note duration.

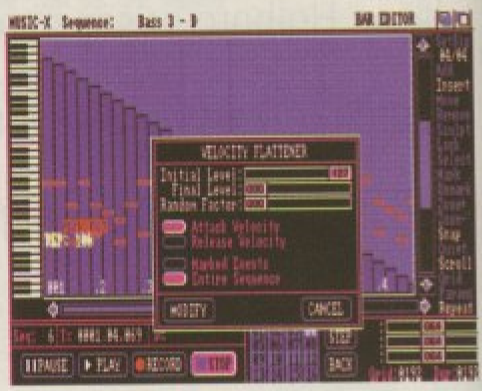
Editor modes are draw (add notes with the mouse), select (highlight a block of data), erase (click on notes and they disappear) and keyboard, which allows you to add notes in step time using your Midi keyboard. You can also scale notes' velocity and duration.

An extra editing facility allows you to edit the Midi data for a particular event by double clicking on the note in question. This brings up a requester that lists the event's attributes as Midi stream data – a bit like the Event Editor in MusicX. Just click within one of the fields and you can change it simply by typing in the new value.

Quantisation is particularly well handled by Trax. As well as the usual facilities, it lets you to shift notes slightly away from the quantisation grid, therefore allowing you to play a sequence slightly ahead or behind the beat.



Trax uses the now familiar tape transport controls



Songs are built up by arranging measures within the Trax Song Editor. This option alone makes Trax something pretty special

Song creation

Most budget sequencers leave a lot to be desired when it comes to song creation. Indeed, even the professional version of MusicX doesn't offer any real form of song editing (PlaySeq events don't count!). However, Trax has shown them all how it's done with its dedicated song editor.

Almost identical to the one in its big brother, Master Tracks, the editor builds up a song by manipulating the available tracks in terms of measures. Each track is displayed as a number of graphic blocks, each block representing a single measure.

These blocks can be moved around and new sequences created by cutting and pasting down blocks from other sequences.

Conclusion

Trax is a darned good sequencer capable of handling the most demanding sequencing tasks. But for a program that is aimed at the amateur musician, I just can't understand why Passport didn't build in support for the Amiga's sound chip. After all, not all of us can afford such luxuries as multiple sound modules, samplers and synths.

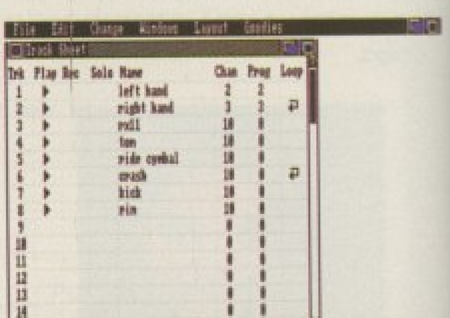
The editing facilities are second to none. Both the Step Editor and the Song Editor are well designed, powerful and above all, easy to use.

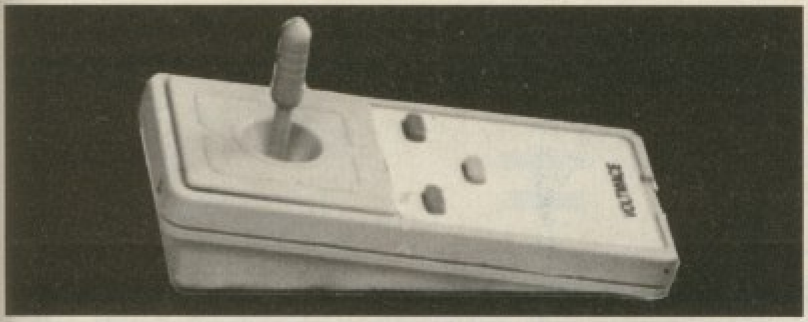
If terms of raw sequencing power, you couldn't really ask for more from a budget offering. But it's the lack of sound chip support that really lets it down.

WRITE TO ME! If you're a musician who uses the Amiga, *Amiga Computing* wants to hear from you. Whether you've got something you'd like to get off your chest concerning the Amiga and music, or you've got a handy hint to help other musicians get the most from Amiga music products, get in touch.



The new Velocity Flattener module lets you set the velocity of selected notes to a constant value.





DELTA 3A ANALOGUE JOYSTICK

FOR MICROPROSE F19 & SUBLOGIC FLIGHT SIM II

Fly your planes the smooth and realistic way with an analogue joystick. The Delta 3A is a light action, hand held, sprung return to centre joystick of a proven reliable design used for many years by BBC and PC users. It has two fire button functions. The top two fire the cannons and the centre lower button fires missiles. On FSII version 1.1 the throttle can be controlled by using the centre button and the stick.

DELTA 3A JOYSTICK	£14.95
DELTABASE A YOKE STYLE JOYSTICK	£29.95
AMI-CAT MOUSE ELIMINATOR JOYSTICK	£29.95
F19 STEALTH FIGHTER	£29.95
FLIGHT SIM II	£27.95
SCENERY DISCS	£14.95
AMIGA DISC DRIVES (CHINON) CASED WITH THROUGH PORT AND DISABLE SWITCH	£59.95

Delta 3A Joystyicks should be available from your Amiga dealer. If not they are available direct from us (price includes VAT & P&P):

VOLTMACE

Unit 9 Bondor Business Centre, London Road,
Baldock, Herts SG7 6HM
Tel: 0462 894410

VISA

FOR

COMMODORE AMIGA COMPUTERS

TALK TO US

WEST MIDLANDS AMIGA

The specialists

May we take this opportunity to wish all our customers Big & small a merry keyboard bashing Christmas.

We at West Midlands *Amiga* deal only in Commodore *Amiga* computers and all its accessories.

We give free technical advice with a user friendly approach.

So don't hesitate to call.

For a personal appointment (with no obligation)

OR

advice – help call **(0905) 794955**

Business hours MON-FRI 18.00-21.00 SAT 09.00-21.00
87 Westbury Avenue, Droitwich, West Midlands WR9 0RT

NEW! – "NEW DIMENSIONS" – NEW!

Amazing 3D effects make your Amiga come alive. You will find that graphics and pictures float before your eyes in front of your screen! The depth of the pictures extends up to ten feet into the screen! These fantastic effects have to be seen to be believed. Included on the disc are generous numbers of 3D pictures, 3D graphics and 3D games. We even provide a tutorial to help you design your own 3D effects on a paint package or write your own 3D programs. Included in the package are two pairs of 3D specs so you can experience these amazing effects with a friend. Probably the most impressive pictures/graphics you have ever seen on a computer! New Dimensions package – **Excellent value at £13.95.**

NEW! – DESIGN-A-TEESHIRT – NEW!

Have you ever wanted to put YOUR art work on a T-shirt? Just send us a disc with your picture/logo/slogan on and we will send you back a high quality white cotton/polyester T-shirt with your art work printed on it. (We will of course return your disc!) Ideal presents with your own individual design. Artwork from paint packages or digitisers is ideal. Please state your size – small, medium, large, extra large. **Outstanding value at £14.95.**

THE NEW – "BEGINNER'S GUIDE TO AMIGADOS"

This is a highly effective way to take you from a beginner to an expert on AmigaDOS. This very popular package has now been COMPLETELY updated to cover all AmigaDOS versions. The package consists of a guidebook, a tutorial DISC, a crib card and FREE software worth over £20. This is a clear and well thought out guide to AmigaDOS. It takes you by simple steps, with many examples through the powerful AmigaDOS commands. The emphasis is on learning through experience and doing – not just reading like most other books. In no time at all you will master a fast, powerful and customised operating system . . . you can easily include your own pictures, messages and programs.

The guide includes an incredibly fast picture loader, a password system, a gallery of high quality pictures, a variety of boot up sequences, other high quality programs and much, much more . . . Guide book, Disc, Cribcard etc. **only £13.95.**

WIZARD'S GUIDE TO BASIC

This is a very effective and enjoyable way to learn BASIC. The whole concept is designed to help you learn quickly and achieve impressive results in no time. Your confidence and skills will rise rapidly as you make your way through this course. The Wizard's BASIC guide comes on two discs with a sophisticated electronic book – You can get help in the form of text, moving demonstrations, graphics, sound or speech with just a touch of a button. The course starts at beginner level and carefully rises to expert level. You will learn to master graphics, colour, sound, movement, speech, windows, menus, dataprocessing etc. Hundreds of example programs and demos are included. This is a value packed package which will leave you with a wealth of knowledge and expertise. **Excellent value £13.95.**

MASTERPIECE

"THE BEST PICTURES I HAVE EVER SEEN ON THE AMIGA" reported a recent review. This package takes you on a spectacular trip through the world of art. Every picture is of true quality and is displayed using thousands of colours. To help you enjoy the world's heritage of art to the full we have included comprehensive notes on each artist and painting. Whether you are an art expert or know nothing at all about art, this is a wonderful way to appreciate the great paintings of the world (and appreciate the graphic capabilities of your Amiga as well). The package comes with two discs packed full of pictures and information. **Outstanding value £8.95.**

EXTRA VALUE!

Buy two or more of the above products and benefit from the following discounts . . . 2 products – £2 discount, 3 products – £3 discount, 4 products – £4 discount etc. Discounts are given on the TOTAL value of the order.

UK P&P – FREE and by FIRST CLASS post. Overseas orders welcome – Europeans please add 50p Outside Europe please add £1.50 for airmail. All payments in pounds sterling please.

Cheques/P.O.'s to:
Wizard Software (Dept. ACC)
20 Hadrian Drive, Redhills, Exeter, Devon. EX4 1SR

AMIGA ATARI & PC SOFTWARE

The Tipster

This **HORSE RACING** software was used to select the 100/1 NORTONS COIN outsider in this years GOLD CUP. Data for this program requires the **RACING POST.** An **INTERNATIONAL** version is available for **AMIGA** & **ATARI** computers using the **DAILY MIRROR** for data on UK races.

VISA **£29.95**

The Punter

Let your computer **WIN THE POOLS** for you with our latest software. We have used the same sums that the **TIPSTER** proves can beat the odds to give you a better chance with on any pools coupon. The **AUSTRALIAN** version is included on the disk which also contains the **LATEST ENGLISH** leagues.

VISA **£29.95**

The Dogs

This **GREYHOUND RACING** program is available on the **AMIGA** and **ATARI ST.** Using data from either the **DAILY MIRROR** or **RACING POST,** you can rate races over **HURDLES** and the **FLAT.** Very easy to use, this program will rate 5 races in under 1/2 an hour

VISA **£29.95**

★ ★ PART TIME PROGRAMMERS REQUIRED ★ ★
If you have games, utilities or business programs written on the Amiga, Atari ST or PC, please send details and a demo.

TAM Marketing
7 GD UNITS, Marsh Barton
Trading Estate, Exeter Devon
SALES: 0392 427186
ENQUIRIES: 0392 215485

PLEASE QUOTE AMIGA COMPUTING

COMMUNICATIONS

Before you enter the alienesque landscape of the alternative reality that is comms, Armitage has some really helpful advice

OK, so ya have your deck and you have your sox. Or to put it another way, you have a modem and you have some comms software.

If you have been smart and listened to what I've said previously, your deck will handle *at least* 2400 baud, and the software will be a PD/Shareware package such as Ncomm, Access! or JRcomm.

Hold on there. Maybe you are still not convinced. Maybe you're chicken. What's worrying you? Phone bills scare ya? High price of equipment? Tch. Pathetic. Don't tell me you believe all the nonsense the Powers That Be spread?

Phone bills need not be a problem. OK, so it's not free. But what is? Even the electricity which drives your Amiga costs money. If you are sensible (or tight) you can get online several times a week and still have change from a fiver.

In fact, you could probably buy a few tubes with the change as well. It's only expensive if you want it to be. You always have control. Remember that.

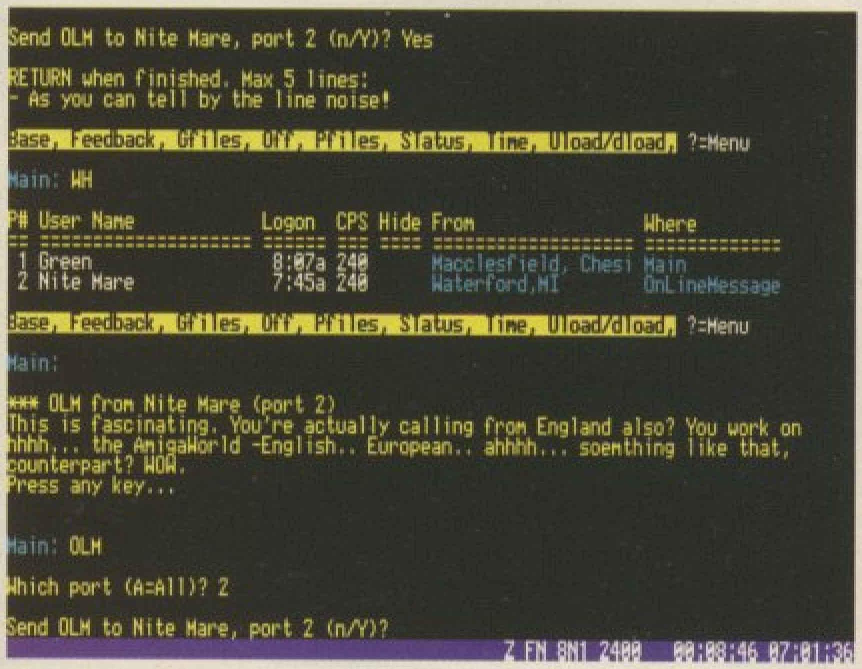
Expensive equipment? Of course it is. Just like buying a motorbike. You could spend twelve thou on a Bimota. Or you could spend four hundred on a second hand 1982 GPz500. It's up to you.

A few words of warning regarding second hand modems. You'll find that quite a few fellows are waiting to dump their equipment to help finance something more modern. As a result, you will surely be tempted with offers such as a 300 baud deck for less than fifty sovs. Think carefully!

Although fifty quid is not (relatively speaking) a lot of dosh, the fact the deck runs eight times slower means your phone bill could be eight times bigger too.

OK, so if the offer is just too good to refuse, and you only want to try comms out to see what all the fuss is about, then go for it. You could always sell the thing to some unsuspecting comms-virgin later, couldn't you?

Comm scan also be a good way to meet people – here a user is engaged in banter with a comms junkie in the states.



So you have your deck and sox. What next?

Cables. Is your Amiga talking to the modem? This should not be a problem, as the good old 'miga sports a decent RS232 port. Plug in and go with any standard cable.

If you are having probs, check the pins. They are usually sensible, and seldom require more than a transmit line, a receive line, a ground and an acknowledge. Easy.

To connect your deck to the national phone network, you need a new-style BT socket. If your house is still fitted with the horrible 1/4 inch jack plugs, ring up BT and crackle at them.

Tell 'em you have static. Tell 'em you can't hear your dear granny when she calls. Chances are the first thing BT will do is change your sockets. Worked for me.

Most modems will auto-dial. This means when you plug 'em in instead of the phone, your computer will dial the BBS numbers for you. No phone button punching required.

If not, or you think you may want to use speech occasionally, you'll need to connect your phone as well as the modem. Some modems have through ports for the phone, but if yours doesn't a splitter from your local Tandy will solve this problem.

If might be worth your while getting an extension cable too. Setting up your computer in the hall so you can use the phone is not fun, especially if you hall is as cold as mine.

Finally it's time to go. Pick a number from the list overleaf, and check to see that it's the right time. If the board says it's 24hrs you can't go wrong.

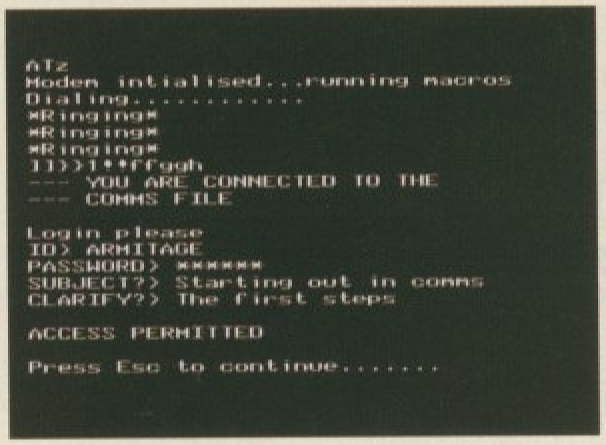
Copy the number into the Phone Book part of your comms software. Then go for it. Dial it.

If you are lucky and get online first time, let me know. I have never seen it happen. More likely you will hit an engaged tone, the baud rates won't match or it just won't work.

I know how you feel. Keep trying!



COMMUNICATIONS



AMLINK BBS2 021-778 5868
V21/22/22b/23 24Hrs Birmingham
Sysop: Martin Creighan

BARNEY'S RUBBLE 021-441 1801
V21/22/22b/23 24hrs? Birmingham
Sysop: Jon Morby

MABBS 021-444 8972
V21/22/22b/23 24hrs Birmingham
Sysop: Mark Caro
Amiga orientated + PCBBC.

PLUG-OLE 021-472 0256
V21/22/22b/23 24hrs Birmingham
Sysop: 'Plugger'
It's an experience everyone should try

LINENOISE 031-332 6747
V22/22b 8pm-8am Edinburgh
Sysop: Andy Bain

BREAKTHROUGH 051-734 5817
V21/22/22b/23 24hrs Liverpool
Sysop: Jim Hamilton
Everything

P'S & Q'S 051-236 3105
V21/22/22b/23 24hrs Liverpool
Sysop: Alan Smith
Upload bureau for typesetting.

ASPECTS 061-792 0260
V21/22/22b/23 24hrs Manchester
Sysop: Dave Gorski
Excellent SIG for Amiga

D.I.E. 061-434 9907
V21/22/22b/23 24hrs Manchester
Sysop: Simon Thornton

ALLIANCE 061-339 0337
V22/22b 10pm - 7am Manchester
Sysop: Snoopy Co-Sysop: Jessica (kissy kissy)

HARLEQUIN 061-945
3612 V21/22/22b/23 24hrs
Manchester
Sysop: Tony Grimshaw

061 for AMIGA 061 7994922
V21/22/22b MNP 4pm-11pm Manchester
Sysop: Andy Grifo
Over 200 files online

071 for AMIGA 071-377 1358
V21/22/22b/23/32 24hrs London
Sysop:Tony Miller

HAZZARD BB 071-737 0505
V21/22/22b/23 8pm-7am London
Sysop: Ben Amure

POLYNET BB 071-580 1690
V21/22/22b/23 24hrs London
Sysop: Eileen McCabe
Disabled orientated.

AMIGA CONNECTION 081-503 0593
V21/23 7pm-9am London
Sysop: Paul Roffey (NOTE NEW NUMBER)

LONDON GUEST HOUSE 081 7480974
V21/22/22b/23/32 24Hrs London
Sysop: ???
Yet another Paragon BBS

CIX 081-399 5252
V21/22/22b/23 24hrs London
Sysop: Hangout for poseurs and manufacturers. Subs only

DOMAIN BBS 081-773 2422
V22/22b 24hrs London
Sysop: David Boardman

HEALTH-DATA 081-986 4360
V23v 24hrs London
Sysop: Dr Chris Dobbing
Medically orientated.

DATASEL/WANDERLAND 081-680 5330
V23 24hrs London
Sysop: Ted Greene

MUG. Also: 01-681 8081
Wid: 24hrs.

LONDON **METROPOLIS** 081-519 1055
V21/22/22b/23 24hrs London
Sysop: Terry Sinclair

PACKET BBS 081-547 1479
V21/22/22b 24hrs London
Sysop: Ted Batts
Packet Radio orientated.

NO ESCORT REQUIRED 081-200 3817
HST 24hrs London
Sysop: John Catlin

ORGANIC GARDEN 081-464 3305
V21/22/22b/23 24hrs London
Sysop: Bob Campion
Horticulturally orientated.

BIG BANG BURGER BAR 081-420 6356
V21/22/22b/23 24h London
Sysop: Paul Roberts
Belgium man I'll get my towel. AMOS section

PROMETHEUS 081-300 7177
V23v 24hrs London
Sysop: Barry Spencer
Astronomy orientated.

ARGUS PROJECT 091-490 0327
V21/22/22b/23 24hrs Tyneside
Sysop: Graham Denman
Radioactivity monitoring project.

PUBLISHING SHOP 091-261 5228
v21/22/22b/23 24Hrs Tyneside
Sysop: Roger Booth
Dtp and stuff

KERNOW BB 0209 821670
V21/22/22b/23 24hrs Kernow
Sysop: Dave Randle
An Opus board

INDEX LINKED 0227 770403
V21/22/22b 24hrs Whitstable
Sysop: Carl Ricketts
CP/M as well as Amiga stuff here.

CLAPHAM JUNCTION 0234 64261
V21/22/22b/23 24hrs Bedford
Sysop: Mark Lewis
V22bis on 0234 213510.

C-SIDE 0242 222981
V21/22/22b 24hrs Cheltenham
Sysop: Tim Hawkins
C orientated.

ANDROMEDA GALAXY 0243 379430
V21/22/22b/23 24hrs? Emsworth
Sysop: John Cheyne

BITMAP BROTHERS 0245 413728
V21/22/22b/23 24hrs Chelmsford
Sysop: Mike Montgomery
Well Chelmsford had to have something didn't it.

YUKON HO! BBS 0232 768163
V21/22/22b/23 24hrs Belfast
Sysop: Mark Kerr Co-Sysop: Jim Rowan
Pre release game demos and Echo Mail

ADRIAN'S BBS 0247 465385
V21/22 24Hrs Co.Down
Sysop: Adrian Wilson
New but Ulster BBS

AMIGA BOARD 0268 510495
V22/22b/23 24hrs Canvey Island
Sysop: Keith Bloom ('Crashman')

MAGNUM 0274 547006
V21/22/22b/23 24hrs Bradford
Sysop: Keyop Troy

CASTLE BBS 0276 691872
V21/22/22b/23 24hrs Camberley
Sysop: Neil Gossage

BLITTER 0292 671638
HST 24hrs
Sysop: Derek Stracey

AMIGA SOUTH-EAST 0293 28464
V21/22/22b/23 24hrs Crawley
Sysop: Kevin Cannell
Amiga/ST/PC board

SHADES 0342 810905
V23 24hrs East Grinstead
Sysop: Neil Newell (Hazell)
MUG. Plus another MUG: 'Trash' - type PCLINK at .

KNIGHTOWL 0375 375190
V21/22/22b 24Hrs
Sysop: Paul Gooch
Official UK rep. for Paragon.

END TO END 0376 84644
V21/22/22/23 24hrs
Sysop: Glyn Cornfield

DARK HALO 0392 434477
HST 24hrs Exeter
Sysop: Stuart Henderson

NORTH YORKS QBBS 0423 868065
V22/22b? 24hrs Nidderdale
Sysop: Mike Wigmore
Host of machines supported

PISTON POPPER 0424 853361
??? 24hrs Hastings
Sysop: Peter Burnett

CV DATABASE BB 0427 810211
V22/22b 24hrs Gainsborough
Sysop: Martin Jones
Jobs/CV database.

LOFT 0442 230461
V21/22/22b/23 24hrs Hemel
Hempstead
Sysop: Martin Carter

SCS ONE 0444 236002
V22b 24hrs Who knows?
Sysop: Chris Stone

GAUGONZOLA BBS 0453 511112
V21/22/22b 24hrs Sharpness
Sysop: Lawrence Freeman
Amiga orientated.

BETELGEUSE 5 0463 231339
RB V21/22/22b/23 24hrs
Inverness
Sysop: Hugh Allan
This is a board that has been described as zany.

KASHMIR'S BBS 0472 347882
V21/22/22b/23 7pm-8am Grimsby
Sysop: Kashmir perhaps?
Runs on BBS-PC

CODE-O-MATIC 0472 360811
V21/22/22b 24Hrs Grimsby
Sysop: Oliver Smith
Origin of the BBS Pub and home to many new ideas

GOURMET 0474 536654
V21/22/22b 24hrs Gravesend
Sysop: David Banes
Catering Orientated.

FAMILY SKELETONS UK 0480 812097
V22b 24hrs Huntingdon
Sysop: Bill Hamilton
Genealogy orientated.

HAMNET 0482 465150
V21 24hrs Hull
Sysop: Joe Lawrence
Amateur radio orientated.

HAL BBS 0488 681069
V21/22/22b/23/32 24Hrs
Sysop: Ned Benjamin
Another Paragon board

SIRIUS II 0494 778425
V21/22/22b 24hrs Amersham
Sysop: Martin Brown

CLIFF'S CORNER 0502 518274
V21/22/22b/23 24hrs Lowestoft
Sysop: Cliff Jones

END ZONE 0524 752245
V21/22/22b/23 24hrs Lancaster
Sysop: Adam Purnell

BOGGIN 0532 483563
V23/23v 9pm-8am Leeds
Sysop: Russell Green

PLUS AND MINUS 0559 322766
V21/22/22b/23 24hrs Lampeter
Sysop: Tony Jowers

MISSION IMPOSSIBLE 0602 654329
HST 24hrs Nottingham
Sysop: Keith Barnes
A Wildcat board

PCAMIGA BBS 0602 735119
V22/22b 6pm-M't Nottingham
Sysop: Mark Potter
A fabulous furry Opus board

EUREKA GATEWAYS 0603 250689
V23/23v 24hrs Norwich
Sysop: Carl Wright/Roger Miah
HQ of Channel-X.

MADNESS BBS 0603 300947
V21/22/22b/23 24hrs Norwich
Sysop: Ted Jackson

K-WOOD 0608 83458
HST 24hrs Great Tew
Sysop: Clive Waller

DEEP THOUGHT 0634 683696
HST/V32 24hrs Rochester
Sysop: Paul Boakes
Fidonet 2:252/105.

EDDIE'S BBS 0635 71324
V21/22/22b/23 24hrs Newbury
Sysop: Eddie Seymour
PCSTAmgBBC.

WHITE LIGHTNING 0635 37259
V22/22b 24hrs Newbury
Sysop: Richard Darnell

FOX'S DEN 0689 27085
V21/22/22b/23 24hrs Orpington
Sysop: Barry Freeman
Subs for FULL access.

BIKE SHOP 0705 827764
V22/22b 24hrs Portsmouth
Sysop: Dave Horton.

GABBS 0705 524805
V21/22/22b/23 24hrs Gosport
Sysop: Stephen Cole
Formerly Ape-House.

LAMPLIGHT QBBS 0705 811531
V21/22/22b/23 24hrs Portsmouth
Sysop: John Lambon

MICRODEAL 0726 65422
V21/22/22b/23 24hrs St.Austell
Sysop: Mark Prigg
Runs on Michtron software surprise surprise.

CRITICAL MASS BBS 0727 56939
V23/23v 10pm-6am St Albans
Sysop: Grahame Treliving
Formerly Aardvark's Realm.

HEARTBEAT 0734 352032
Reading
Sysop: Sue Waring

SPEED BBS 0734 475549
V21/22/22b 24 Hrs Reading
Sysop: Stephen Brazil
Relatively new but expanding fast!

AMIGA SHACK 0737 361178
V21/22/22b/23 24hrs Epsom
Sysop: Peter Debono
Amiga and PC interest. Runs Tag-BBS

JOLLY FISHERMAN 0754 67796
V21/22/22b/23 24hrs Skegness
Sysop: Martin Parker
A Paragon Board (so it must be good)

EMPYRION 0792 580781
V21/22/22b/23 9pm-6am Swansea
Sysop: David Westron
Formerly Swansea Amiga BB

WAYFARER 0846 607665
v21/22/22b/23/32 7pm - 7am
Sysop: Herbie (for one reason or another)
Good BBs but it gets lonely - give it a call

WELLAND VALLEY BBS 0858 66594
HST 24hrs Market
Harboro'
Sysop: Eddy Ralphson

BAR 0904 642560
V21/23/23v 24hrs York
Sysop: Darren Soothill

DIGGERTEL #1 0925 411268
V21/22/22b/23 24hrs Warrington
Sysop: John Balshaw

VIKING BBS 0950 60434
V21/22/22b/23 24hrs Shetland Isles
Sysop: Graeme Story
Special areas for disabled and handicapped

TREASURE ISLAND 0992-447273
V21/V22/V22b/V23/V32 24Hrs Herts.
Sysop: Jonathan Morris
Still nothing to do with animals

THE BEST ST HOME FINANCE PROGRAM
NOW AVAILABLE FOR THE AMIGA

AMIGA VERSION

* FULL MULTI TASKING
* OVER 100 BUDGETS SELECTABLE
(10 ANALYSABLE)

Personal Finance Manager

£29.95

–The Worlds Most Sophisticated Personal Finance Program–



If you run a personal bank account and have a Commodore Amiga then you need "PERSONAL FINANCE MANAGER".

AS EASY TO USE AS A CALCULATOR
PFM makes full use of Amiga's Workbench interface, if you need to amend or update an entry or Standing order simply click on it. Your screen looks just like a bank statement!

STANDING ORDERS & DIRECT DEBITS EATEN ALIVE
PFM handles Credit and Debit - Monthly,Quarterly, Yearly and even complicated regular payments like 12 payments of £52.99 followed by one of £12.50, PFM will check the date and automatically insert standing orders as they become due.

BUDGET WITH EASE, AT A CLICK OF A MOUSE.
If you're the type that likes to look ahead then PFM allows you to set budgets for both expenditure and income. Over 100 budgets can be set over a year, a quarter or a month and then 10 can be displayed either in figures or as a bar graph for a given period. Expenditure for these budgets can also be shown as a pie chart so you can tell at a glance where your money's gone. PFM also allows you to display or print your budget groups selectively so you can see your expenditure quickly and easily.

BALANCING WITH YOUR BANK ACCOUNT IS NO LONGER A JUGGLING ACT
When you get your bank account statement or a balance from an autobank machine you can confirm it with PFM quickly and easily. Simply select PFM's unique "Auto Balance" option and type in the balance as given by the bank and PFM will attempt to balance and highlight entries that have not yet been processed through the bank.

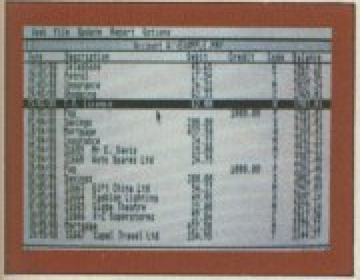
Home Finance Program By Peter Veale.

Amiga Version by Dan Lennard.

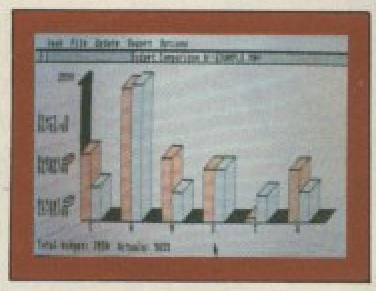
Here's what the critics say:
"PFM is one of those rare programs with which it is easy to feel comfortable from the first time you run it."
Ron Massey, ST USER

"Personal Finance Manager is a sophisticated home financial package, it will probably help you save money."
ST UPDATE.

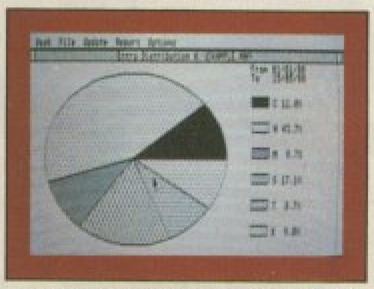
"PFM is just the ticket if your expenditure is as disorganised as mine."
POPULAR COMPUTING WEEKLY.



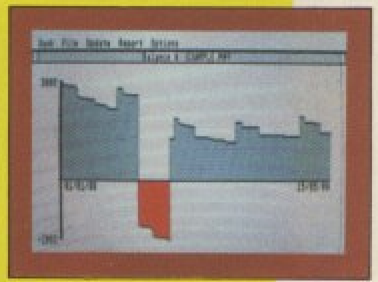
MAIN ACCOUNT SCREEN



BUDGET COMPARISON BAR-GRAPH SHOWING BUDGETS & ACTUAL EXPENDITURE OR INCOME



PIE CHART SHOWING SELECTED ENTRIES OVER CHOSEN DATES



BALANCE DISPLAY SHOWING HIGHS & LOWS OVER SELECTED DATES

OTHER FEATURES

- The number of entries is limited only by memory size
- You define the file size
- Old entries are automatically deleted
- Automatically places entries in date order
- European or U.S.A. date formats
- Balance of account graph
- Moveable and re-sizeable windows
- Run multiple bank accounts by simply using different file names. Multi-Tasking allows Multi-Account access.
- Facility to check off items against statements
- Locates cheques written months ago in seconds
- Selective print features for dates/statements/standing orders and budgets.

Free 30-Day Trial
Order direct from MICHTRON and if you are not 100% satisfied, return within 30 days for a full refund.

NOT COPY PROTECTED

TO ORDER:
SEND TO: MICHTRON
PO BOX 68, St. Austell,
Cornwall. PL25 4YB.
Allow 28 Days for delivery.

BY PHONE:
WITH CREDIT CARDS.
TELE: (0726) 68020.
£30.95 (incl P&P).

AMIGA VERSION

Please send me **Personal Finance Manager** at £30.95 (incl P&P)
☐ Cheque enclosed made payable to MICHTRON
☐ Please debit my credit card account:
☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ Expiry date:
Name
Address
Signed:

MichTron®

DESKTOP PUBLISHING

Nic Veitch takes a look around at what's going on in the expanding DTP world and tries to mention someone other than his friends at Gold Disk

The world of DTP, resting as it does upon the crest of the wave of new technology, is an ever changing place. Someone's always developing new whatsits that makes some process easier or something like that. As soon as you become proficient you become outdated – there is a constant state of flux that must be ridden even as something mythological probably had to be. Anyway, on with what's going down.

Price war

I don't know, some people don't know how lucky they are. First of all we give away a very nice demo on the coverdisk and now Gold Disk have dropped the price of their famously wonderful Pagesetter II. What happens? We get complaints. Well, okay, we got an awful lot of letters saying how wonderful the demo was and all that, but there were one or two dissenting voices. One guy wrote in to complain that he couldn't place text at an angle. Well, I mean, I'm so sorry. We must have overlooked that. The fact that the only DTP package (but not for long) that can do this is the very latest version of Quark Xpress is neither here nor there.

The point of all this is that Pagesetter II is now available for around £53 from HB marketing (0753 686000), or if you have no joy there I believe Silica Shop (081-309 1111) can do you a deal. It is not only the best value DTP package for the Amiga, it is the only one specifically designed for those of us who don't have a Class 1 laser product at the other end of the parallel cable. Other price restructuring effects Pro Page V1.3, now £169 ex. VAT and the Outline Fonts package, now £108.75 ex. VAT.

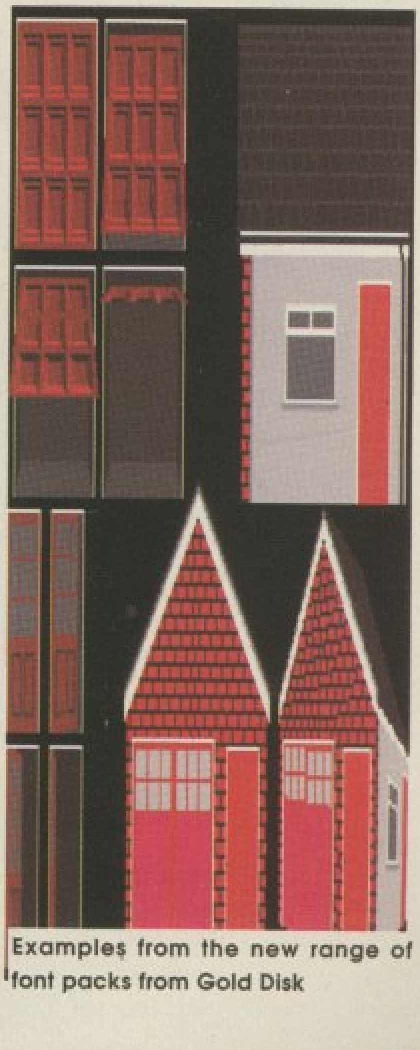
Gold Disk have brought out a new range of scalable fonts. Aimed at more specific areas than the Outline Font pack these fonts are once again licensed from AGFA, the world's largest producer of sizable-fonts.

Four packages are available at the moment, each containing three fonts. It is possible to use these fonts to create a statically sized bitmap font for use in any Amiga software which uses workbench fonts (i.e., a lot of wordprocessors, nearly all art packages...).

The four packs (Designer, Publisher, Decorative and Video) will be retailing in this country for around £35. Font aficionados are reminded that Gold Disk have a library of over



Price cuts across the board for Gold Disk products



Examples from the new range of font packs from Gold Disk

DESKTOP PUBLISHING

100 Compugraphic fonts which can be ordered direct.For more information contact Gold Disk at their new offices in Ontario on (0101 4166024000)

Clippin 'eck

One thing that's always useful when dabbling with DTP is a nice spot of clip-art. According to Diskotech 80 per cent of Amiga owners in this country have one or more art packages, and clip-art isn't necessarily restricted to DTP.

Hopefully trying to be of help when at the last minute you find yourself 400 words short with a space to fill at the bottom of Page 60, these people have put together what could be the first of many "oven-ready" disks of useful stuff.

House builder, apparently, is a comprehensive library of many graphic elements which can be combined to reproduce, in correct colour and scale any house of the present, past or conceivably the future. There are over 750 graphical elements to fool around with.

All the pieces share the same 32-colour palette and general scale for ease of compatibility. The houses can be combined with some of the customising clips such as catflaps, satellite dishes and the like to create truly individual pieces.

House builder comes on two disks with a manual including tutorials and is available for £30 from Diskotech

Professional DTP

Yes, it's Gold Disk again. I know what you're thinking but can I help it if they seem to be the only active people in the world of DTP. I mean they don't get all this coverage because of cute PR people or anything (sorry Keith).

Well, it was in the wind wasn't it? First Pagesetter got seen to, then Pro Draw had a spring clean, now it's Pro Page's turn. Although copies have not turned up for review yet I think I can pass on some of the information we have received from Gold Disk.

Improved features will include style tagging, rotation of text and graphics, automatic page numbering and faster PostScript generation. The really big additions will be 24-bit colour support and Pantone colour matching.

Pantone is almost another industry standard. If you talk to your local printers they will understand all about it, or at least have heard of it. This addition means that you will now be able to define the colours and rest assured that they will come out exactly as you specified them. Style tagging is a real boon too. Just imagine. You can set tags onall the copy before you read it into Pro Page. No more messing around waiting for the screen refresh just because you had to set a crosshead in a different size. No more relentlessly searching through oceans of text looking for the thing that was supposed to be in italics...

Pro Page will now support 24-bit colour files, such as those produced by ray tracing packages, scanners etc. This means they can be imported into a document and separated to their original colour depth.

Just because you can't see them very well on screen doesn't mean that you can't print them out!

The ease-of-use flavour seems to be one aspect they are keen on keeping. Every copy will ship with an instructive video-tutorial to enable users to get to grips with it fast.

Professional Page 2.0 should be shipping by the time you read this at the wonderful price of £395, whatever that gets converted into by distributors here.



House Builder comes with a collection of examples...



...and a collection of brushes to add that personal touch


SPEEDBALL
2
BRUTAL
DELUXE
SOME DAY, ALL SPORT WILL BE PLAYED THIS WAY
It's two years since the last ball was thrown on a Speedball pitch. There are new teams, new stadia and new rules. The arena is bigger, the players are tougher and the action is faster than ever before.
The challenge is this. Take control of Brutal Deluxe, the worst team in Speedball history, and turn them into champions.
Transform weaklings into killers in the gym.
A squad full of wimps? Shell out for a Star Player!
Two divisions and 15 teams stand between you and the championship. Take no prisoners.
It's a goal!
Celebrate that moment of glory in style.
THE BITMAP BROTHERS
© 1990 THE BITMAP BROTHERS
© 1990 MIRRORSOFT LTD
IMAGE WORKS, IRWIN HOUSE
118 SOUTHWARK STREET,
LONDON SE1 0SW
TEL: 071-928 1454
FAX: 071-583 3494
IMAGE WORKS

Money? Get back. You'll be alright Jack with Paul Austin looking after your stack. Swop your jeans and T shirt for a tie and biro and bravely enter the world of corporate finance



BUSINESS

THE Amiga's brilliant sound and graphics capabilities has in the past tended to mask the contribution it can offer in the business field. But now more and more business-orientated software is introducing it into Britain's offices.

Aimed a little lower down the market than the accounts office is Personal Finance Manager, a powerful database with full Workbench compatibility which will hold an account only limited in size by available memory.

Although theoretically huge, and certainly useful for a small business, it has been designed on a much more personal level.

After setting the starting balance for the account, alterations are made via *transaction forms*. Account entries and standing orders are the means by which changes in your balance are made, for example when you go shopping, or perhaps a monthly loan repayment. Consequently you have to keep all receipts so you can keep your account up to date.

Entries can be checked against a formal statement or deferred, this being displayed in the program, making balancing your statement much easier. Checked items are denoted by a tick next to the relevant entry. All entries are automatically ordered by date.

Standing orders can easily added to the account. These orders can already be in operation.for instance, say if you have a loan running at the moment and you wish to add to the account simply enter how often, how much and how long the loan has to go, and the account will then reflect the debit from the balance when the amount is due.

Orders can also be suspended if required, but when the suspension is lifted all outstanding payments will be made. Also variations in the amount due can catered for, such as a change in the mortgage rates.

Balancing the account is made even easier by ***Reconciliation***, a process by which the program will automatically balance your account over a definable period, deferring payments until a match is achieved with your bank statement.

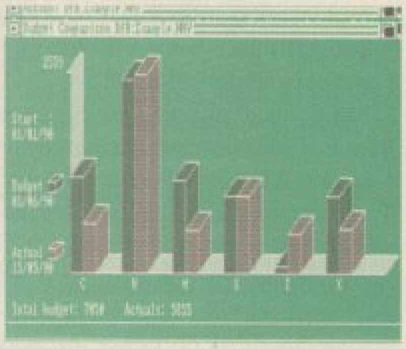
Deferring transactions can also be carried out manually. This simply suspends any particular transaction from appearing in the present balance, but does not remove it from the account. This can be done when the transaction has cleared.

It's also possible to set up a budget by using code letters when entering details- for example, **L** for loan. A set amount can then allocated to each category. These can be displayed in numerical or chart form showing actual and budget amounts.

Ten separate categories can be created which can be separately fil-

Balance display chart: Now that's what's known as a bad patch





Budget comparison bar chart: What you see is what you've spent, and what you thought you would

Double graph: Take a closer look, or compare last month with this



tered for individual analysis- useful for finding out excatly where all your money goes and why.

If more than 10 categories are required – say one covering car spares for a year – simply enter a separate code letter for each entry concerning car spares and when the analysis is required alter one of the filter codes to the designated code and filter the data in the usual way. The result is a detailed account of all spares expenditure over the last month, quarter or year as required.

The real power of the program begins to show when using graphs and charts. Each of the component parts can be displayed in a pie chart format showing spending on a specific budget. Also a budget comparison is available as described above .

The account can also be displayed on a bar graph showing the account over any predetermined time period. One month's graph can be displayed alongside another, both using the same graph format and thus the improving analysis. You can see at a glance any major change in expenditure.

Each of these screens and graphs can be displayed at once via Workbench style sizable windows. The refresh rate when resizing a window isn't very good, but it is sifting through an awful lot of data. Different time periods can be displayed in each graph and up to five separate windows can be on screen at one time.

Printouts are available (and standing orders), either of the entire account, or over a specified period. The size of the account (and standing orders) can also be pre-specified.

If for example the number of entries was limited to 100, on the one hundred and first entry the program would wrap-around, adding the first two entries together to produce a new starting figure.

A ***Goto Date*** option will move to a specified point in the account so there's no need to scroll through a long list of account details.

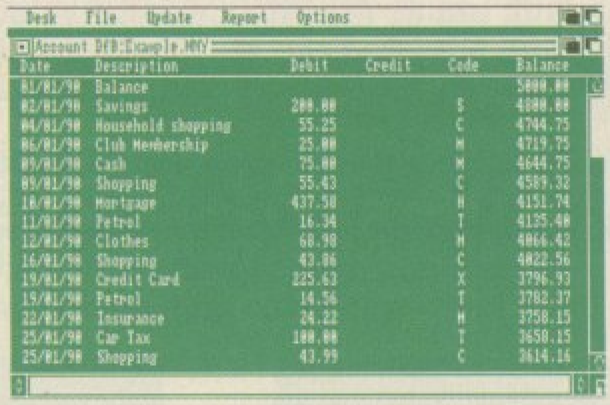
When all alterations are complete the details can be saved directly to disk either under the present filename, thereby saving over the old data or, if required, as a separate file.

I found the program excellent, ideal for personal or even small business accounts. The only problem will probably lie, if you're not an orderly person, in keeping entries it up to date. But if you can change your ways you may change your debits to credits, permanently.

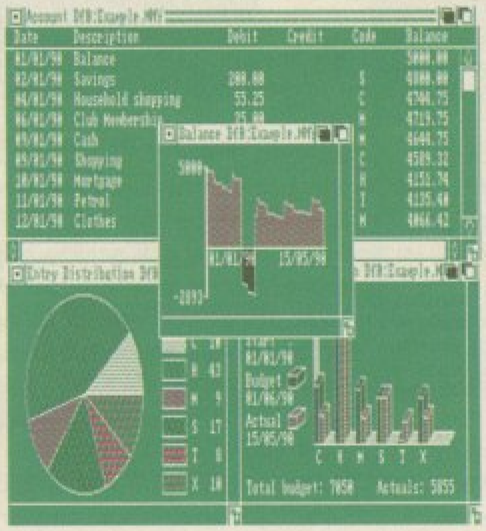
Personal Finance Manager
Michtron/Microdeal P.O. Box 68,St. Austell, Cornwall, PL25 4YB.
Tel; (0726)68020)



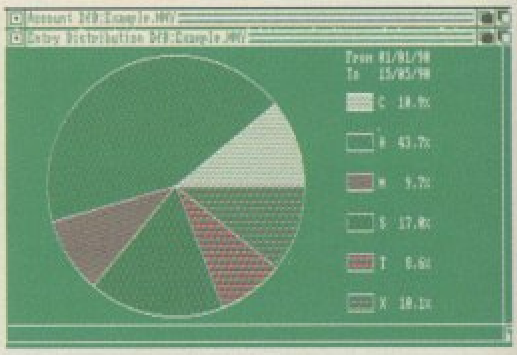
BUSINESS



The main account screen, where facts and figures first appear.

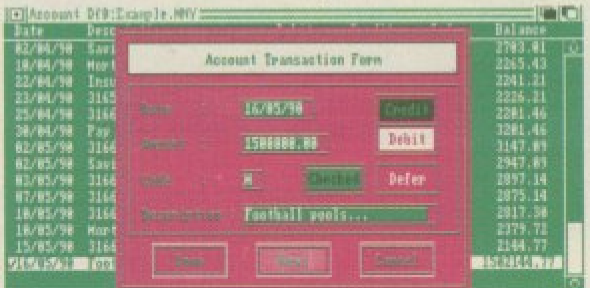


Everything can be displayed at once in dynamically resizable windows



Pie chart: Cut yourself a slice, and find out who else has

Transaction form: Where all the money hopefully goes in, or perhaps out



AMIGA A500 £339

Screen Gems, Deluxe Paint II, Days of Thunder, Back to the Future II, Shadow of the Beast, The Night Breed, Mouse, TV Modulator .
Same price – Flight of Fantasy

AMIGA 1MB £499

Class of the 90's, First Steps, Deluxe Paint II, Deluxe Print II, Prowrite 2.5, Info File, Music Master, Let's Spell, Amiga Logo, Talking Turtle, BBC Emulator. Mouse, Modulator, Mouse Mat, 10 Blank Discs

Above prices only when purchased together with any monitor and printer. Add 5% when purchased with printer or monitor, on its own add 10%. All prices include VAT.

MONITORS

Philips 8833 II	£259.99
Commodore 10845D	£269.99

PRINTERS/CABLE

Citizen 120D+	£149.99
Star LC10	£159.99
Panasonic 1180	£179.99
Star LC200 Col	£219.99
Panasonic 1124	£259.99

DRIVES

3.5" Internal	£59.99
3.5" External	£63.99
Amiga 20Mb HD	£369.99

MISCELLANEOUS

PSU for Amiga	£39.99
Naksha Mouse	£29.99
Megaboard Joystick	£19.99
20 Disks 3.5 DSDD	£9.99

UPGRADES

0.5Mb No Clock	£34.99
0.5Mb with Clock	£44.99

SOFTWARE

Photon Paint 1	£9.99
Kindwords 2	£39.99
Protext 4.2	£69.95
K-Data	£37.99
K-Spread 2	£44.99
Music-X	£169.99

MANY GAMES IN STOCK

STARTER PACK

Mouse Matt, Dust Cover, Megablaster Joystick, 10 Disks in Library Case
£15 (with Amiga)

PRINTER PACK

Spare Black Ribbon, Dust Cover, 200 Sheets of Comp. Paper, 100 Labels
£10 (with Printer)

WEST LONDON SHOWROOM

Ealing Computer Centre, 19 Queens Parade, Ealing, London W5 3HU. Tel: 081-991 0928
• Courier Delivery of Set £15 • All offers subject to availability • E.&O.E. • Visa • Access
• Corner of Hanger Lane (North Circular) and Queens Drive • Nearest Tube North Ealing
• Easy Parking
YOU MUST QUOTE THIS AD AT TIME OF ORDER FOR THESE LOW PRICES!

Amiga Genlock Mixer

G2 SYSTEMS

VIDEOCENTER VC1

Video Mixing & Keying – Fade to Black
True S-VHS Key
RGB Buffered Output
Software Controllable
Transparent Colours Adjustable
Price £645.00 exc. VAT

VIDEOCENTER VC2

As VC1 but with 20 Wipe Patterns
Circular
Diagonal
Wipe/Insert
Wipe Position via Joystick
Price £995.00 exc. VAT

Upgrade VC1 to VC2 £425.00 exc. VAT

All available from:
G2 Systems, 5 Mead Lane, Farnham, Surrey GU9 7DY
Tel: (0252) 737151

---

commodore

A3000 IN STOCK! AMIGA

Prices include VAT, delivery & warranty. Please add £15 for overnight delivery. All systems are tested before despatch. On-site maintenance options available.

- Amiga A3000-25/100, 6MB £3145
- Amiga A3000-25/40, 3MB £2895
- Amiga A3000-16/40, 3MB £2595
- Amiga B2000 latest UK model, with 1.3 Roms and 1MB chip-RAM £795
- Amiga B2000 with A2091 40MB Quantum 11ms autoboot hard disk £1145
- Amiga B2000 with A2286 PC-AT bridge board & 5¼" disk drive £1295

■■■ B2000 + XT Bridge Board + 40MB autoboot hard disk £1395!

PERIPHERALS AMIGA

- A2620 68020 Card + 2MB 32-bit £895
- A2630 25MHz + 4MB 32-bit £1195
- A2286 PC-AT board & 5¼" drive £595
- A2088 PC-XT board & 5¼" drive £349
- C2058 8MB Board, 2MB installed £256
- RAM for above, per 2MB ... £128
- RAM for A3000, all types ... Phone
- A2091 fast SCSI hardcard 2MB 0k £225
- A2091 + 40MB 11ms Quantum £495
- A2091 + 105MB 11ms Quantum £845
- RAM for A2091, per MB ... £52
- Quantum ProDrive 40MB 11ms £349
- Quantum ProDrive 105MB 11ms £695
- Amiga A500 v1.3 complete ... £349
- KCS PC Power Board £320
- C1010 NEC 3½" slimline drive £79
- RAM for A590, per MB ... £52
- Supra Modem 300-2400 baud £159
- Supra 2400zi internal modem £159
- A1084SD colour stereo monitor £259
- 14" MultiScan high-res monitor £445
- Flicker Fixer multiscan adaptor £349
- Trackball Marconi RB2 £59
- HP DeskJet 500 inkjet, 300 dpi £595
- HP PaintJet colour inkjet 180 dpi £925
- Rendale 8802 Genlock £199
- Rendale Pro Genlock £649
- FrameGrabber all colour modes, overscan, up to 640x400 resolution £549
- SketchMaster 18x12 dwg. tablet, 1000 lpi, with stylus & 4-button cursor £649

■■■ B2000 + AT Bridge Board + 40MB autoboot hard disk £1695!

TELETEXT AMIGA

Why not enjoy the free **Teletext** databases with the **MicroText** Teletext adaptor... Fully programmable, with **Fastext** facility, instant access to last 16 pages, double page view, **telesoftware** loader, auto-start/background operation... Pages can spoken, printed as ASCII or graphics, saved as ASCII or IFF files... And it turns your 1081/1084/8833 monitor into a digital TV! Available now for only **£139!**

■■■ Amstrad FX9600AT Fax + Printer + Copier + Scanner £100 off!

PRODUCTIVITY AMIGA

NEW! Lattice C v5.10		£159.95
A/C Basic v1.3		109.95
Amiga Logo		39.95
C64 Emulator v2		39.95
Workbench v1.3 Enhancer		12.95
SuperBase Personal		24.95
SuperBase Personal 2	Relational database power, without programming!	49.95
" " Professional v3	"The Rolls-Royce of Amiga databases" (NCE)	154.95
SuperPlan	Pro spreadsheet with business graphics, time planner	49.95
Personal Tax Planner	UK Income Tax computation program, from Digita	19.95
Doctor Ami	Guru stopper... disables bad disk blocks and RAM!	39.95
Excellence 2	New improved version of high performance WP	129.95
Pagestream 2	With major new features incl. Agfa/Adobe fonts	149.95
Professional Draw 2	Now much faster, with auto-trace, curved text & more...	99.00
Professional Page v1.3	Includes WP, Desktop, colour separations, CAD	159.00
CG Outline Fonts	35 Agfa CG fonts for ProPage, ProDraw 2, PageSetter 2	99.00
Gold Disk Type	Choice of 4 sets of 3 Agfa CG fonts, per set ...	39.95
Pagesetter 2		£59.95
Pen Pal		79.95
Publisher's Choice		64.95
Works Platinum Edition		99.00
VizaWrite Desktop v2		49.95
System Programmer's Guide		24.95

■■■ PAGESTREAM 2 PRODRAW 2 EXCELLENCE 2... In stock now!

CREATIVITY AMIGA

NEW! AmigaVision		£99.95
Digiview Gold V4.0		99.95
PageFlipper + F/X		39.95
De Luxe Paint II		24.95
Fantavision		24.95
Walt Disney Animation Studio		99.95
Introcad Plus	Powerful new version of popular CAD program	79.95
NEW! Broadcast Titler	Broadcast quality titling with 4-level anti-aliasing	199.95
NEW! Pro Video Post	The ultimate in video presentation, titling & effects	224.95
Pro Video font sets	Choice of 5 sets of 4 anti-aliased fonts, per set...	89.95
TV-Text Professional	Latest full-feature video titler, includes Zuma fonts	99.00
TV-Show v2.02	Video presentation, special effects & transitions	54.95
Sculpt 3D XL	Much faster than Sculpt 3D, with 24-bit plane option	89.95
Turbo Silver		£99.00
Digipaint 3		59.95
De Luxe Video 3		89.95
RGB Splitter		69.95
ColourPic Digitiser		475.00
SuperPic Genlock/Digitiser		595.00

■■■ IF YOU WANT IT TOMORROW... CALL US TODAY! ON 081-546-7256 ■■■

Prices are POST FREE & include VAT. Order by phone with your credit card, or send cheque/PO or your credit card number. We welcome official orders. Software sent same-day by 1st Class post, but please allow five days for hardware delivery, unless overnight. Prices subject to availability. Ref. A75

VISA

Calco Software

LAKESIDE HOUSE, KINGSTON HILL, SURREY, KT2 7QT. TEL 081-546-7256

AMOS genius and insufferable bighead Peter Hickman keeps up to date with what's new and has us all reaching for our joysticks

WOTCHA AMOS freaks, how are things going? Well with the European Computer Entertainment Show and exciting new AMOS projects popping up, things have been really busy this month.

So before I rabbit on with the AMOS news let me just say how nice it was to meet some of you at the E.C.E.S. (I could be found annoying everybody on the Mandarin Software stand). All of your comments were very much appreciated and I will try and incorporate some of your suggestions into this column.

A couple of you said I went too fast in the first instalment of our ongoing write-a-game series, especially Peter "Baby Bear" Lee, who thought I tried to squeeze too much in. Oh well, I think I've gauged this month's part of the AMAL tutorial to the correct level.

New for AMOS news. Here is a big exclusive straight from one of Mandarin Software's programmers: Fun School 3 – the top selling series of educational programs written with AMOS – is being converted to work with the Commodore CDTV (gasps of shock and horror).

What future implications this has for AMOS users is currently the subject of much speculative comment and I cannot say any more 'cos I've been told to keep my big trap shut! (I just hope the CDTV sells in big numbers.)

With AMOS 1.2 finished (get your copy of the update disk from the AMOS PD library, phone Sandra Sharkey on 0942-495 261 for more details) François Lionet has been busy working on some new goodies for us lowly Basic programmers.

The major new addition to AMOS is a new music extension which has better support for converting some of the more complex Soundtracker modules. I don't have a copy yet, but by the time you read this it should be available from the AMOS PD library. Of course François is also busy on the AMOS Compiler which should be available in January (keep those fingers crossed).

Our last piece of news concerns AMOS 3D. Quite a lot of you asked about the 3D demo which was running at the show and hopefully a fully interactive demo should be available before Christmas in all major PD libraries.

Although the product will not make an appearance until January (busy month for AMOS users) I have a feeling that you can get a sneak preview of it if you turn up at the Computer Shopper Show.

One late piece of news which has just reached me is that Gipper the mad Mandarin monkey made famous by numerous "guest" spots on STOS and AMOS packaging, has finally cracked and let loose with an Uzi 9mm at Europa House.

Rumour has it that the demented creature had felt rejected by Mandarin staff ever since the Fun School 3 teddies came onto the scene. Richard Vanner said: "It's very sad, all he does now is sit in a corner and suck a banana. Perhaps I shouldn't have let him listen to Steve Wright in the afternoons?"

Fortunately nobody was injured in this incident. 'Nuff said!

Give it some stick

LAST month we looked at simple movement and animation using AMAL (you did buy last month's issue, didn't you?). Now let's see how to move the little guy with the joystick.

Press the Escape key to jump to Direct mode and insert the AMOS Data Disk (the one with Amosteroids, Magic Forest and all of the other games on) then type;

```
LOAD"AMOS_DATA:MAGIC_FOREST/MFSPRITES
.ABK"
```

We now have the SPRITE file with our little geezer present in memory for us to muck about with. We are going to have to do a bit more typing than usual, so press Escape to jump back to editor mode and type these next few line which will tidy up our display:

```
CURS OFF : FLASH OFF : HIDE ON : CLS 0
DOUBLE BUFFER
GET SPRITE PALETTE
```

OK, now the really hard bit (well it's not that hard, I just wanted to alert you). It's time to design the AMAL program which will make our guy move left and right according to our joystick movements.

One tip I can give all budding AMAL writers is that when constructing an AMAL program I find it best to jot down some notes on a scrap of paper as well as a complete list of all external and internal registers (more about those as we go along) as some strings can become very complicated – just look at Amosteroids.

The first thing we need to do is to set up a starting label for our AMAL program. While this is by no means essential, it comes in handy as a reference point. Remember to type this next line in exactly as it appears:

```
A$="Begin:"
```

That wasn't hard was it? Now we need to test the joystick. We can easily do this using two "special" AMAL registers ,J0 and J1. The first returns a value from port 0 (or the mouse port to all readers who, like me, prefer user-friendlier terms) and the latter returns a value from the joystick port (port 1).

The value passed into these registers by the Amiga depends on which way you move the joystick. By pushing up you will get a value of one, by pushing right you will get a value of 8, by pushing up and right you will get a value of 9.

There should be a simple diagram somewhere around this page showing the values given when the joystick is manipulated. These should make life a bit easier (there are other ways to look at how joystick values can be interpreted but they all involve a bit of binary maths so we will forget those for now).



AMOS3D coming soon

OK, type this in :

```
A$=A$+"If J1=1 then Jump Left ;"
A$=A$+"If J1=8 then Jump Right ;"
A$=A$+"Jump Begin           ;"
```

You will have noticed that when the program detects a movement – either left or right – it jumps to another label. This is because of the way AMAL works – it will only let you follow an `If' statement with a Jump, eXit or Direct command. The last line tells AMAL to jump back to the label we defined at the beginning of the program.

Now comes the really exciting bit, the movement and animation. We need to define the labels Left: and Right: which the main part of our AMAL program will jump to if the joystick is moved. Follow each of these we will need to put the commands we want executed if any of the joystick conditions are met. Type this :

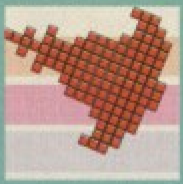
```
A$=A$+"Left:Anim 1,(1,4)(2,4)(3,4)(2,4)(1,4)
; Move -16,0,16 ;"
A$=A$+"     Jump Begin ;"
A$=A$+"Right:Anim1,(6,4)(5,4)(4,4)(5,4)(6,4)
; Move  16,0,16 ;"
A$=A$+"     Jump Begin ;"
```

As you can see, we start the line with the Label name followed directly by the animation data. You should always put your animation before movement 'cos AMAL will not execute the next command until it has finished moving.

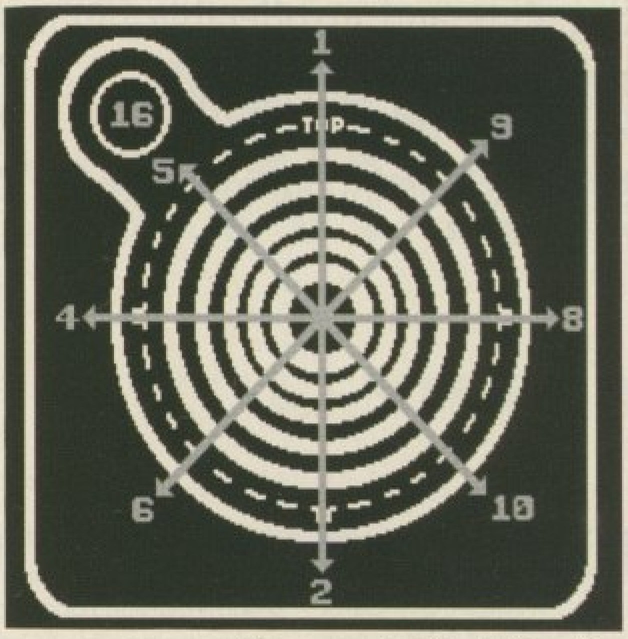
After we have finished moving the geezer the AMAL program is told to jump back to the label Begin. This allows another set of tests to be made for the joystick movement. Of course, all of this happens 50 times a second (60 times a second in the U,S,A,), amazing huh?

Anyway we have our AMAL string, and now we need to display the BOB and assign its animation channel, so type this (it's roughly the same as in the last issue) :

```
BOB 1,160,100,1
CHANNEL 1 TO BOB 1
AMAL 1,A$
AMAL ON 1
DIRECT
```



AMOS



Value responses for different stick positions

I am rapidly running out of space, so before I go let me give you a quick explanation of the AMAL external registers. These are labelled RA to RZ and let the user communicate with the AMAL program.

One of the best examples so far is Amosteroids – I didn't say the game was that good but it makes excellent use of the AMAL registers.

In this game when an asteroid is hit by your ship it passes a value into an AMAL register which is continually checked by the Basic part of the program. When the value is introduced to the register the Basic program plays an explosion sample.

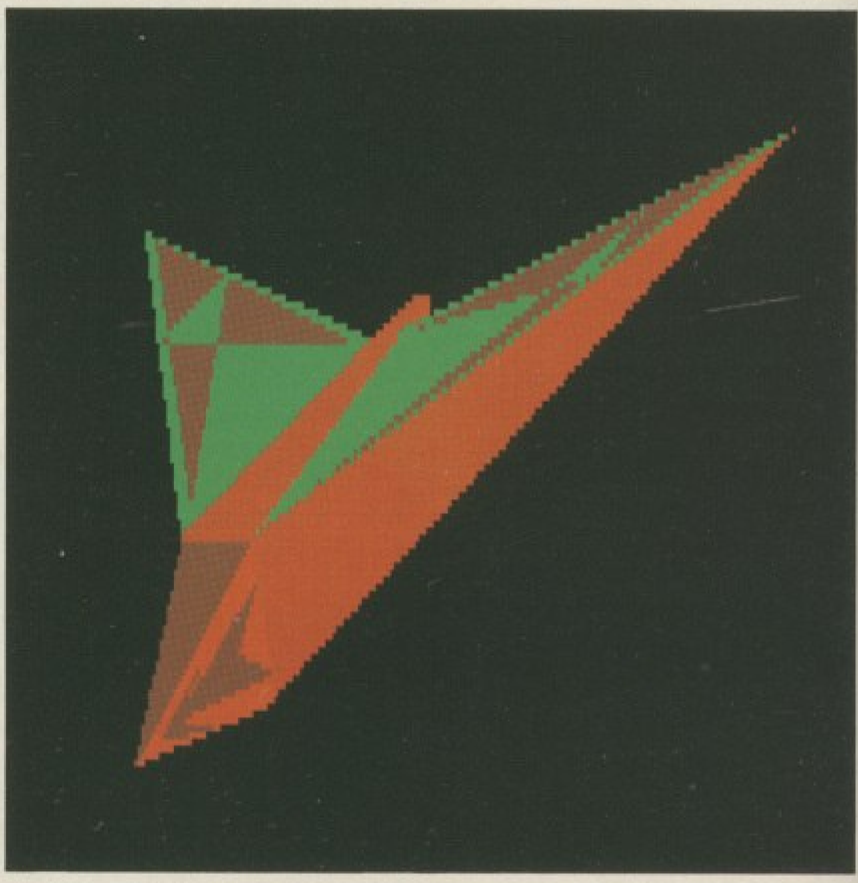
I'll take you through an example of using registers in the next issue, but for now take a look at the program on the Cover Disk which uses an externc register to tell the Basic progran whether the player is moving left o right.

Also on the Cover Disk are some of the sprites from Fun School 3 for you to play around with. A complete set is available from the AMOS PD library.

Oh, Richard Vanner wants me to remind you all that Fun School 3 is an excellent series of educational programs available from Database Educational Software, but I won't 'cos I'm not getting paid on a royalty basis.

•Next month we will explore the mysteries of registers and scrolling (space permitting). Have fun.

Stills from the AMOS 3D Demo



Atari 520 STFM
Discovery Pack
£269.95

MAIL ORDER

SOFTSELLERS

MAIL ORDER

Atari 520 STE
Power Pack
£349.95

6 BOND STREET, IPSWICH, SUFFOLK I04 1JE

Access

VISA

5A DOG'S HEAD STREET, IPSWICH, SUFFOLK (RETAIL)

MAIL ORDER PURCHASE LINE (0473) 257158/210605 FAX NO. 0473 213457

Title	Price
*4th Dimension	16.99
*Adidas Champ Tie Break	16.99
*Adidas Championship Football	16.99
*Alcatraz	16.99
Alpha Waves	16.99
*Amnios	
Anarchy	13.99
*Ancient Art of War	16.99
*Ancient Art of War At Sea	16.99
*Aquaventura	24.99
Armourgeddon	16.99
*ATF II	16.99
*Atomic Robokid	16.99
*Atomics	13.99
*Awesome	
*Bad Blood	19.99
*Bad Lands	16.99
*Barbarian II (Psygnosis)	16.99
Batman (The Movie)	13.99
Battlechess	16.99
*Battle Command	16.99
Battle Master	19.99
Battle of Britain	19.99
*Betrayal	19.99
*Billy the Kid	16.99
Black Tiger	13.99
*Blade Warrior	15.99
Bomber	19.99
*Buck Rogers	16.99
*BBS Jane Seymour	16.99
*Cabal	13.99
*Cadaver	16.99
*Carthage	15.99
*Champion of Raj	16.99
Chaos/Dungeon Master	19.99
Chase HQ	13.99
*Chess Champion 2175	16.99
*Chess Simulator	16.99
*Chuck Yeagers A.F.T.	16.99
Combo Racer	16.99
Conquerer	16.99
*Corporation	16.99
*Cutipo	16.99
*Crimewave	16.99
*Commandos Compilation	15.99
Damocles	15.99
*Days of Thunder	19.99
Defender of the Earth	12.99
*Dragon Flight	19.99
Dragons Breath	19.99
*Dragon War	16.99
Dungeon Master Editor	9.99
Drakken	19.99
*Duster	16.99
*Dynamic Debugger	15.99
Dynasty Wars	16.99
*Eagle Rider	16.99
Ecstacy	13.99
*Edition 1 (Comp)	19.99
Emlyn Hughes International Soccer	16.99
Escape from the Planet of Robot Monsters	13.99
Falcon Mission II	13.99
*Flash Dragon	13.99
F29 Retaliator	16.99
F19 Stealth Fighter	19.99
F16 Combat Pilot	15.99
Falcon	16.99
*First Contact	15.99
*Final Battle	16.99
*Finale (comp)	16.99
*Flight of Intruder	16.99
*Flippit Magnose	16.99
Flood	16.99
*Football Simulator	13.99
*Future Basketball	16.99
*Gold of the Aztecs	16.99
*Golden Axe	13.99
*Guns & Butter	19.99
*Halls of Montezuma	16.99
Hammer Fist	16.99
*Hard Driving II	16.99
Harley Davidson	19.99
*Harpoon	
Heroes (Comp)	19.99
*Heroes Quest	24.99
*Hollywood Collection	19.99
Hound of Shadow	16.99
Hot Rod	16.99
*Immortal	16.99
Imperium	16.99
*Indy 500	
*Interceptor	16.99
*International 3D Tennis	16.99
*International Championship Wrestling	16.99
International Soccer Challenge	16.99
*Iron Man	13.99
*It Came from Desert	16.99
Italy 1990	13.99
*It Came From The Desert	16.99
Ivanhoe	13.99
*Jack Boot	16.99
*Jack The Ripper	12.99
*Judge Dread	13.99
Jumping Jackson	12.99
Kick Off Extra Time	9.99
*Kick Off II	12.99
Kick Off II (1 Meg version)	19.99
Kick Off II World Cup Edition	16.99
Klax	13.99
Killing Game Show	16.99
Last Ninja II	16.99
*Last Stuntman	12.99
*Learing Terramis	13.99
*Legend Billy Boulder	16.99
*Legend of Faerghail	16.99
Leisure Suit Larry III	29.99
*Lemmings	16.99
*Life & Death	19.99
*Light Corridor	13.99
*Lost patrol	13.99
Loom	16.99
*Lotus Turbo	16.99
*M1 Tank Platoon	19.99
*Magic Fly	16.99
*Magician	16.99
Man Utd	13.99
Manic Mansions	16.99
*Matrix Maruaders	16.99
*Mean Street	16.99
Midwinter	19.99
*Moan Blaster	16.99
*Monty Python	13.99
*Murder	16.99
*Murder in Space	16.99
*Mystical	16.99
*Myth	16.99
*Navy Seals	16.99
*Narc	16.99
*Nebulus II	16.99
*New York Warrior	13.99
*Night Breed	16.99
*Nitro	16.99
North and South	15.99
Nuclear War	16.99
*Obitus	24.99
Op Stealth	16.99
*Operation Harrier	16.99
Operation Thunderbolt	13.99
Oriental Games	15.99
*Outboard	16.99
*Panic Station	13.99
*Panig	16.99
*Paradroid 90	16.99
Photon Storm	13.99
Pinball Majic	13.99
Planet Busters	13.99
Police Quest II	16.99
Player Manager	12.99
*Plotting	16.99
*Pop Up	13.99
*Powermonger	19.99
Projectile	16.99
*Pyramax	13.99
*Railroad Tycoon	16.99
Rainbow Islands	13.99
*Rally	16.99
*Ramrod	16.99
*Reach for the Sky	16.99
Resolution 101	16.99
Red Storm Rising	15.99
*Rick Dangerous II	16.99
*Riders of Rohan	16.99
*Robo Cop II	16.99
Rotox	16.99
Rourkes Drift	16.99
S.E.U.C.K.	19.99
*Secret Agent Flies By	13.99
*Shadow Sorcerer	16.99
Shadow Warriors	13.99
*Simulcra	16.99
*Skate or Die	16.99
*Sly Spy	13.99
*Speedball II	16.99
*Spindizzy II	16.99
*Spy Who Loved Me	13.99
Starflight	16.99
*Star Trek 5	24.99
*Street Fighting Man	13.99
*Stun Runner	16.99
*Silver Blades	16.99
*Shadow of the Beast	16.99
*Snow Strike	16.99
*Steven Hendry Championship Snooker	16.99
Storm Across Europe	19.99
Super Cars	16.99
*Supremacy	13.99
*Sim City	19.99
*Subbuteo	16.99
*Super League Manager	16.99
*Survivor	15.99
*Sword of Samuari	16.99
*Team Suzuki	16.99
*Teenage Turtles	16.99
Tennis Cup	16.99
*The Plague	16.99
*TNT	19.99
TV Sports Football	16.99
Triad III or IV (compilation)	19.99
*The Keep	16.99
Theme Park	16.99
*Thunder Strike	16.99
*Time Machine	16.99
*Toki	16.99
*Total Recall	16.99
*Tournament Golf	13.99
*Toyottes	13.99
*Turbo Buggies	13.99
Tusker	16.99
*Twilight	16.99
*TV Sports Basketball	16.99
*The Gales	16.99
Ultimate Golf	16.99
Universe III	15.99
Untouchables	13.99
*UMS II	19.99
Ultima V	19.99
*Up & Away	16.99
*Vaxine	13.99
*Vendetta	16.99
Venus Fly Trap	13.99
*Voodoo Nightmare	16.99
*WLF	16.99
*War Jeep	16.99
*War Monger	16.99
Warhead	16.99
*Weltris	16.99
*Wings	13.99
*Wheels of Fire	19.99
*Wolfpack	16.99
*Wonderland	
*World Championship Soccer	13.99
World Cup Soccer 90	13.99
Xenomorph	16.99
*Yolanda	16.99
*Zone Warrior	16.99

MAIL ORDER PURCHASE LINE (0473) 257158/210605 FAX NO. 0473 213457

ATARI 520 STFM
DISCOVERY PACK
Bombjack, Carrier Command, Outrun, Space Harrier, STOS, Neochrome, First Basic, ST Tour, Discover the ST

£269.95

ATARI 520 STE
Turbo Pack
STOS, Basic, Music Maker II, Hyperpaint II, Indiana Jones, Impossible Mission II, Human Killing Machine, Supercycle. Outrun, Dragons Breath, Anarchy, Bloodmoney.

£349.95

ATARI 1040 STE EXTRA
Prince, Hyperpaint, STAC, ST World, ST Base, ST Calc, ST Graph

£449.95

ATARI LYNX HANDHELD
Portable Games Machine California Games

£179.95

ATARI SM124
Monochrome Monitor

£99.95

PHILIPS 8833
Colour Stereo Monitor

£249.95

ATARI EXTERNAL DRIVE
1 Megabyte DS

£79.95

DISC BOXES WITH DISCS

3.5" 40 Holder Lockable with 10 3.5" dsdd discs	£11.99
3.5" 40 Holder Lockable with 20 3.5" dsdd discs	£15.99
3.5" 40 Holder Lockable with 40 3.5" dsdd discs	£27.99
3.5" 80 Holder Lockable with 10 3.5" dsdd discs	£13.99
3.5" 80 Holder Lockable with 40 3.5" dsdd discs	£29.99
3.5" 80 Holder Lockable with 80 3.5" dsdd discs	£49.99

JOYSTICKS

Cheetah 125	£7.99
Cheetah Starprobe	£11.99
Pro 5000 Extra Glo Green	£13.99
Pro 5000 Extra Glo Red	£13.99
Pro 5000 Black	£11.99
QS Turbo III	£9.99

PERIPHERALS

Replacement mouse + mouse holder + mouse mat	£29.95
Four Player Adaptor	£5.95
Mouse Mat	£4.95
Joystick Extender	£5.95
Dust Cover	£4.95

DISCS

	Qty 10	Qty 20	Qty 50	Qty 100
3.5" dsdd Unbranded	£6.99	£11.99	£29.99	£49.99
3.5" dsdd Sony Branded	£11.99	£22.99	£54.99	£99.99

DISC BOXES

3.5" 40 Holder Lockable	£4.99
3.5" 80 Holder Lockable	£6.99
5.25" 50 Holder Lockable	£4.99
5.25" 120 Holder Lockable	£6.99

AMIGA 500 STANDARD
£339.95

AMIGA 500
SCREEN GEMS
Back to the Future II, Days of Thunder, Shadow of the Beast II, Night Breed, Deluxe Paint II

£369.95

AMIGA 500
FLIGHT OF FANTASY
F29 Retaliator, Rainbow Islands, E.F.T.P.O.R.M., Deluxe Paint II

£369.95

AMIGA 500
CLASS OF 90'S 1st STEPS
A501 Expansion Pro-Write 2.5, D Paint II, D Print II, InfoFile, LOGO, Music Mouse, Talking Turtle, BBC Emulator, Box of 10 Discs, Mouse Mat, Resource File, Intro Video, Lets Spell at Home

£549.95

COMMODORE 1084S
Stereo Colour Monitor

£249.95

AMIGA EXTERNAL DRIVE
1 Megabyte DS

£69.95

AMIGA EXTERNAL EXPANSION
512k with clock **£49.95**
512k without clock **£39.95**

A590 HARD DRIVE
20 Meg Hard Drive

£369.95

CHEQUES AND POSTAL ORDERS PAYABLE TO SOFTSELLERS. POST AND PACKING FREE IN UK. OVERSEAS £1.50 per item. Subject to availability and price change without notice. *Some titles may not be released at time of going to press. Shop prices may vary, but personal callers can claim advertised discounts on production of cut-off slip.

TITLE	COMP	COST
TOTAL COST £		

Atari Lynx £179.99

Name..

Address..

....

....

Tel No. ....

Have you ordered from us before Yes ☐ No ☐

AMIGA COMPUTING DEC

Atari 1040 STE £449.95

POWER COMPUTING

AVAILABLE NOW FROM POWER!

THE AMAZING AMIGA 3000



We are proud to present Commodore's new workstation which comes with a full range of exciting features.

All Amiga 3000 machines come with 2MB of RAM, a built in hard disk and the high speed Workbench v2·0. Ideal for the serious user or professional.

Features include:

- 16 & 25MHz Processor Speeds
- 40 or 100MB Hard Disk as standard
- Workbench v2·0 included!
- 2MB RAM expandible on-board to 6MB!
- 68030 Processor with coprocessor
- Superhires Graphics with 1MB RAM!
- Built in SCSI Interface

Amiga 3000 16MHz 40MB	£2495
Amiga 3000 25MHz 40MB	£2995
Amiga 3000 25MHz 100MB	£3195
4MB RAM Expansion	£195
16MB RAM Expansion	£1195

The prices include VAT and 24 hour delivery*

Call us now for more information or drop into our showroom for a demonstration.

* If stocks allow   Monitor is not included

POWER'S FULL HOUSE OF TOP QUALITY SOFTWARE.

Our extensive range of Amiga software currently includes:

Art and Graphics

Animagic	£69
Comic Setter	£49
Deluxe Photolab	£59
Digipaint 3	£49
Elan Performer	£30
Fantavision	£29
Kara Fonts	£49
Pro Video Plus	£169
Pro Draw 2.0	£100
Sculpt 4D Junior	£149
SCULPT-ANIMATE 4D	£229
Turbo Silver	£99
X-Cad Designer	£75
X-Cad Professional	£229
Deluxe Paint III	£85
Deluxe Video III	£79
Digiview Gold V4	£100
Pixmate	£35
Vista	£50
Distant Suns	£35

Word Processing, DTP & Business

Home Accounts	£29
Digicalc	£29
Excellence	£160
Kindwords	£45
Pen Pal	£79
Pagestream	£139
Pagesetter 2.0	£69
Pro Write 3.0	£89

Languages and Development

Devpac Amiga	£45
Lattice C V5	£149
Lattice C ++	£250
Power Windows	£45
Hisoft Basic	£55
Benchmark Modula 2	£99

Utilities

DOS 2 DOS	£29
Cross DOS	£24
X Copy	£24
Quarterback 4.0	£34
Workbench 1.3	£15

Educational

Math Talk	£23.95
Math Odyssey	£24.50
Math-Amation	£39.95
Math WLizard	£24.50
Arithmetic	£24.50
Algebra	£24.50
Learn French	£14.95
Letters for you	£19.95
Learning the Alphabet	£14.95
Kinderama	£24.50
World Atlas	£29.95
Word Master	£24.50
Talking Storybook	£14.95
Spell-A-Fari	£19.95
At the Zoo	£19.95
Aesops Fables	£24.50

Many more in stock - phone for details

COMMODORE AMIGA

WE ARE THE SPECIALISTS WHEN IT COMES TO PROGRESSIVE SOFTWARE. CAN'T SEE THE TITLE YOU'RE LOOKING FOR? CALL 0234 273000 AND OUR SALES TEAM WILL BE PLEASED TO HELP YOU.

Power Computing Ltd • 44a Stanley Street • Bedford • MK41 7RW

Telephone 0234 273000 • Fax 0234 270133

Orders and dealers enquiries welcome by Telephone or Fax

ALL PRICES INCLUDE VAT • PRICES SUBJECT TO CHANGE WITHOUT NOTICE

POWER COMPUTING

THE AMIGA 2000 SPECIALISTS

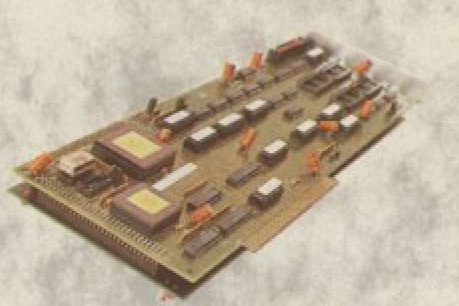
SOLE UK DISTRIBUTOR FOR GVP

68030 POWER

FOR YOUR AMIGA 2000

50MHz Now available!!

- 16MHz, 28MHz, 33MHz
- Accelerate your Amiga up to 10 times normal speed!
- Up to 8MB High speed 32 bit "nibble" RAM.
- On-board AT interface for lightning fast hard disk access
- Optional 68882 Coprocessor



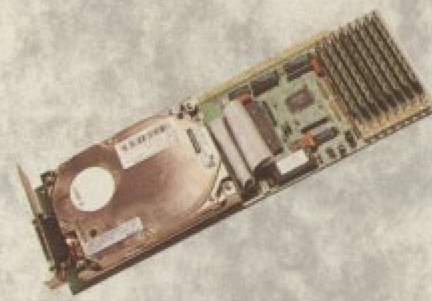
68030 ACCELERATOR BOARD	
16MHz	£499
28MHz	£599
68030 WITH 4MB 32BIT RAM	
28MHz	£1495
33MHz	£1795
50MHz	£2199
AT HARD DRIVE for 68030 CARD	
40MB	£359
80MB	£689
200MB	£999

Phone for other combinations

GVP SERIES 2

The Next Generation in SCSI & RAM Controllers for the A2000

- Fully SCSI Compatible
- Up to 8MB FAST RAM on-board
- High Speed "FAASTROM" controller
- Auto-boot from any FFS partition
- All combinations available



HARD CARDS	
40MB	£499
84MB	£699
100MB	£799
200MB	£999

RAM MODULES	
2MB	£129
4MB	£219
8MB	£409

BUY YOUR AMIGA 2000 SYSTEM FROM POWER

Leaders in the Home and Business Market





Amiga B2000	£899
Extra internal floppy	£49
XT Bridgeboard	£299
AT Bridgeboard	£699
600MB Optical Drive	£3299
200MB Tape Streamer	£699

VIDTECH SCANLOCK

STATE OF THE ART AMIGA GENLOCK

- Broadcast quality video output
- PAL, NTSC, SVHS Compatible
- Handles all Amiga Graphics modes
- Completely Eliminates video dot crawl

NOW ONLY £759!

ICD HARD CARDS		ICD RAM CARDS	
40MB	£429	2MB	£239
84MB	£649	4MB	£349
100MB	£759	6MB	£459
200MB	£949	8MB	£549

SPECIAL OFFER !

BUY ANY B2000 SYSTEM & GET A 40MB HARD CARD FOR ONLY **£349**

Power Computing Ltd • 44a Stanley Street • Bedford • MK41 7RW

Telephone 0234 273000 • Fax 0234 270133

Orders and dealers enquiries welcome by Telephone or Fax

ALL PRICES INCLUDE VAT AND AMIGA 2000 PRICES INCLUDE 24 HOUR DELIVERY • PRICES SUBJECT TO CHANGE WITHOUT NOTICE

POWER COMPUTING

...or Telephone 0234 273000

POWER - the potential for your Amiga!



Basic Pack	As above	£379
Super Pack	With PC880 Drive	£439
Ultra Pack	With PC880 and 512K	£465
Mega Pack	With PC880 and 1.5MB	£509
Hyper Pack	LIMITED TIME ONLY	£879

With PC880, 1.5MB and A590 Hard Drive!

SCREEN GEMS PACK ALSO AVAILABLE
COMMODORE A590 20MB Hard Disk £379

NEW GVP SERIES 2 HARD DRIVE WITH UP TO 8MB RAM EXPANSION



	0MB	2MB	8MB
20MB	£499	£619	£939
45MB	£599	£719	£999
80MB	£849	£969	£1289

NEW! The "PPS" Framegrabber



ONLY £599 INC VAT

- Real-time Digitiser
- From Mono to 4096 Colours
- Many Image processing functions
- Compatible with major art packages

ACCESSORIES The finishing touch

Keep it covered! With this new hard wearing dust cover specially designed to fit snuggly over the Amiga



£9

Video Master now in stock
Call for details

Replacement 2 button mouse	£20
Naksha Mouse	£35
Optical mouse with pad	£35
'Anti-click' board for your internal or external drive - introductory offer	£19.95

Power technical helpline Monday - Friday 3pm - 5pm 0234 273248

POWER HOUSE DIRECT

Power House is the fast expanding direct sales arm of Power Computing Ltd. With competitive prices, backed by large stocks and a trained sales and technical department. Our high speed computerised service makes Power the first stop for the Amiga enthusiast. Call us now on **0234 273000** for advice on the very latest in software and peripherals.



Rush in your credit card order FREE on **0800 581742**. Make the most of our "fast fax" service on **0234 270133**, or simply fill in and post this form to:

Power Computing Ltd,
Power House,
44a Stanley Street,
Bedford, MK41 7RW.

Name

Address

Postcode

Telephone

System owned

Credit Card No.

Expiry Date

Signature

I would like to order

Make Cheques Payable to Power Computing Ltd

I enclose a cheque/PO for

£

Access VISA

SK MARKETING

COMPUTER SUPPLIES



AMIGA HARDWARE

AMIGA BATPACK

Star LC10, cable, Kindwords 2, Fusion Paint, Miniature Golf, Super Ski, Crazy Cars

ONLY £599

BATPACK – £375

NEW PHILIPS TV/MONITOR

★ MEDIUM Resolution Monitor Input
★ Infra-Red Remote Control
★ 15" FST Teletext TV
★ 60 TV Tuner Presets
★ Scart Input/Output connector

SPECIAL OFFER £279.95

A590 20MB Hard Drive	£374.99
Philips 8833 Monitor	£230.00
Commodore 1084S Col. Monitor	£259.95
A501 Ram Expansion/Clock	£129.95
Video Digitizer	£99.95
Cumana 3.5" Drive	£94.95
MES Half Meg Ram Expansion	£50

FLIGHT OF FANTASY

★ Amiga 500 + TV Modulator
★ Deluxe Paint II
★ Escape from Robot Monsters
★ F-29 Retaliator
★ Rainbow Islands
★ Dust Cover & Mouse Mat

ONLY £385 inc VAT

AMIGA B2000 .... P.O.A.

AMIGA HARDWARE

AMIGA BATPACK

Philips 8833 + lead, Kindwords 2, Fusion Paint, Miniature Golf, Super Ski, Crazy cars

ONLY £649

FLIGHT OF FANTASY – £385

SCREEN GEMS – £385

FIRST STEPS – £539

JOYSTICKS call for prices and availability

DOT MATRIX PRINTERS

Star LC10	£173
Star LC10 Colour	£213
Panasonic KX-P1124	£260
Panasonic KX-P1180	£190
LC200 9 pin col.	£230
LC24-200 24 pin mono	£265
LC24-200 24 pin col.	£310

CONTROL CENTRE

Instantly transform your Amiga 500 into an A1000/2000 'look a like' without any modification to the computer. Simply slip the 'control centre' over the Amiga 500 and by reason of its colour match and contour hugging design it becomes an integral part of the computer itself.

- Hides untidy connections at rear of A500
- Holds disk drives, genlocks etc...
- Easy access to joystick parts
- Monitor sits about A500

£54.95

BOOKS

Advanced Amiga BASIC	£18.95
Advanced Syst Prog Gde Amiga	£32.45
Amiga 3D Graphics Prog BASIC	£18.45
Amiga Applications	£16.95
Amiga Assembly Lang Prog	£14.45
Amiga BASIC Inside & Out	£18.95
Amiga C Advanced Programmers	£32.45
Amiga C for Beginners	£18.45
Amiga DOS Inside & Out	£18.45
Amiga DOS	£14.95
Amiga DOS Quick Reference	£8.95
Amiga DOS Ref Guide	£14.95
Amiga Desktop Video	£18.45
Amiga Desktop Video Guide	£18.45
Amiga Disk Drives Inside & Out	£27.95
Amiga For Beginners	£12.95
Amiga Gd Graphics Sound Teleco	£17.45
Amiga Graphics Inside & Out	£32.45
Amiga Hardware Ref Manual Rev	£21.95
Amiga Machine Lang Guide	£21.95
Amiga Machine Language	£14.95
Amiga Microsoft Basic Prog Guide	£18.45
Amiga Prog Handbook Vol. 1	£24.95
Amiga Prog Handbook Vol. 2	£23.95
Amiga Programmers Guide	£17.45
Amiga Programmers Guide	£20.45
Amiga ROM Kernel Ref Man Autod	£28.95
Amiga ROM Kernel Ref Manual	£29.95
Amiga ROM Kernel Ref Man Lib	£32.95
Amiga System Programmers Guide	£32.95
Amiga Tricks and Tips	£14.95
Becoming an Amiga Artist	£18.45
Beginners Guide to the Amiga	£16.95
Compute's 1st Book of Amiga	£16.95
Compute's 2nd Book of Amiga	£16.95
Elementary Amiga BASIC	£14.95
Inside Amiga Graphics	£16.95
Inside the Amiga with C 2nd Ed	£24.50
Kickstart Guide to the Amiga	£13.95
Kids & the Amiga	£15.95
Mapping the Amiga	£20.95
More Tips & Tricks for Amiga	£18.45
Programmers Guide to the Amiga	£23.95

PROFESSIONAL AMIGA SOFTWARE

9 out of 10	£29.95
Animator/Images	£89.95
Animator	£39.95
Animator 3D	£99.95
Arena Accounts	£149.95
C-Light	£39.95
Comic Setter	£44.95
Deluxe Paint II	£49.95
Deluxe Paint III	£64.95
Deluxe Print 2	£39.95
Deluxe Music Construction	£54.95
Deluxe Productions	£99.95
Deluxe Photolab	£54.95
Deluxe Video	£65.95
Digipaint III	£54.95
GFA Basic Compiler	£39.95
GFA Basic Interpreter III	£39.95
Hisoft Devpac V2	£42.95
Hisoft Lattice C	£175.95
Home Accounts	£22.95
Home Office Kit	£104.95
Instant Music	£21.95
K-Data	£34.95
K-Gadget	£19.95
K-Seka	£29.95
K-Spread III	£75.00
K-Text	£14.95
Kind Words V2	£33.95
Mailshot Plus	£40.95
Music X	£169.00
Photon Paint 2	£54.95
Prodata	£59.95
Protext	£64.95
Protext V.5	£110.00
Publishers Choice	£74.95
Quartet	£39.95
Sound Express Stereo Sampler	£39.99
Starter Kit	£54.00
Superbase Personal	£54.95
Superbase Personal II	£65.95
Superplan	£69.95
TV Show	£59.95
Word Perfect	£185.00
Workbench 1.3	£15.00
Zoetrop (5 in 1 package)	£79.95

LEISURE SOFTWARE

688 Attack Sub	£16.99
*Action Stations	£19.99
*Adidas Championship Football	£16.99
Amos – Game Creator	£35.99
Anarchy	£14.99
Answer Back Junior Quiz	£15.99
Armour-Geddon	£17.95
Atomix	£13.99
Ant Heads Data Disk	£11.99
*A.W.E.S.O.M.E.	£23.99
Back to the Future II	£16.99
Battlemaster	£16.99
Battle of Britain (Finest hour)	£19.99
Battle Squadron	£16.99
Battle Chess	£16.99
*Battle of Austerlitz	£16.99
Black Tiger	£16.99
*Betrayal	£19.99
Better Spelling (8-Adult)	£18.95
*Blade Warrior	£16.99
Blitzkrieg May 1940	£17.45
Blood Money	£16.99
Bloodwych	£16.99
Block Out	£13.99
Breach 2	£16.99
Bridge Player 2150	£19.99
BSS Jane Seymour	£16.99
*Cadover	£16.99
*Carthage	£16.99
Castle Master	£16.99
Castle Warrior	£16.99
Champions of Krynn	£19.99
Chaos Strikes Back (1Mb)	£17.45
Chase HQ	£16.99
Chess Champion 2175	£19.99
Codename Iceman	£27.99
Conqueror	£17.45
Colonels Bequest	£27.99
Corporation	£16.45
*Cartoon Capers	£14.99
*Chrono Quest II	£19.99
Cyberball	£14.99
Days of Thunder	£16.99
Discover Chemistry	£13.99
Discover Numbers	£13.99
Discover the Alphabet	£13.99
Distant Suns	£37.99
Dragons Breath	£19.99
Dragons of Flame	£16.99
Drakhen	£19.99
Dungeon Master	£16.99
Dungeon Master Editor	£8.99
Dynasty Wars	£16.99
Dyter 07	£13.99
East v West	£16.99
Edition 1	£19.99
Emlyn Hughes Int. Soccer	£16.99
Elite	£16.99
E-Motion	£16.99
Everton F.C. Intelligension	£14.99
F-16 Combat Pilot	£16.99
F-19 Stealth Fighter	£19.99
F-29 Retaliator	£16.99
Fighter Bomber	£19.99
Falcon	£19.99
Falcon Mission 1	£14.99
Falcon Mission 2	£14.99
Flood	£16.99
*Final Battle	£16.99
Fiendish Freddy	£16.99
Fire & Brimstone	£16.99
Flight of the Intruder	£21.50
Flimbo's Quest	£16.99
Fire Brigade	£19.99
French Mistress	£15.99
Fun School II (under 6's)	£13.99
(6 to 8's)	£13.99
(Over 8's)	£13.99
Fun School 3 (under 5's)	£16.45
(5 to 7's)	£16.45
(Over 7's)	£16.45
Future Wars	£16.99
German Master	£15.99
Ghostbusters II	£16.99
Gold of the Realm	£14.99
Grand National	£13.99
Grand Prix Circuit	£16.99
Gunship	£16.99
Hammerfist	£16.99
Hardball 2	£16.99
Heroes	£19.99
Herewith the Clues	£16.45
Heroes Quest	£24.99
Harley Davidson	£19.99
Hot Rod	£16.99
Hound of Shadow	£16.99
Honda RVF	£16.99
Hypermania	£16.99
Imperium	£16.99
Impossamole	£14.99
Indiana Jones Adventure	£16.99
Indiana Jones Action	£14.99
Infestation	£16.99
International 3D-Tennis	£16.99
*Int. Soccer Challenge	£16.99
It Came from the Desert	£20.99
Ivanhoe	£16.99
Jack Nicklaus Golf	£16.99
Jack Nicklaus Int. Courses	£10.99
Jumping Jackson	£13.99
Kick Off	£13.99
Kick Off 2	£16.99
Khalaan	£17.45
Kings Quest Triple Pack	£24.99
Kings Quest IV	£24.99
Klax	£14.99
Knights of Crystallion	£19.99
Lost Ninja 2	£16.99
Leisure Suit Larry	£14.99
Leisure Suit Larry 2	£24.99
Leisure Suit Larry 3	£27.99
Let's Tell X-Mas Stories	£16.90
Loom	£19.99
*Legend of the Lost	£16.99
Lost Patrol	£16.99
Lombard RAC Rally	£16.99
Magic Maths (4-8yrs)	£18.99
Manhunter	£19.99
Manhunter 2	£19.99
Manchester United	£16.99
Maniac Mansion	£16.99
Maths Mania (8-12yrs)	£18.99
Matrix Marauders	£14.99
Mega Maths	£19.99
Midnight Resistance	£16.99
Midwinter	£19.99
Might & Magik 2	£19.99
*Murder	£19.99
*Necronom	£16.99
Newcomer	£19.99
New Zealand Story	£16.99
New York Warriors	£19.99
Ninja Spirits	£16.99
Ninja Warriors	£16.99
Nuclear War	£17.45
Operation Stealth	£16.99
Overrun	£20.90
*Oriental Games	£16.99
Pipemania	£16.45
Pirates	£16.99
Photon Storm	£13.99
Player Manager	£13.99
Police Quest	£17.45
Police Quest 2	£24.95
Pools of Radiance	£20.90
Populous	£16.99
Populous Data Disk	£9.99
Primary Maths Course	£19.99
Precious Metal	£16.99
Projectyle	£16.99
Pro Tennis Tour	£16.99
Puzzle Book	£13.99
Pyramix	£13.99
Rainbow Islands	£16.99
Red Storm Rising	£16.99
Resolution 101	£17.45
Rick Dangerous	£16.45
*Rick Dangerous II	£17.45
Riders of Rohan	£21.50
Rings of Medusa	£17.99
Rorkes Drift	£16.99
Rotox	£16.99
Second Front	£20.90
Shadow of the Beast	£16.45
Shadow of the Beast II	£23.99
Shockwave	£16.99
Silkworm	£14.99
Shadow Warriors	£16.99
Sherman M4	£17.45
Sim City	£19.99
Sim City Terrain Editor	£11.95
Skid 2	£14.99
*Sly Spy	£16.99
*Snowstrike	£19.99
Space Ace	£32.95
Space Quest 1	£17.45
Space Quest 2	£17.45
Space Quest 3	£24.99
Space Rogue	£19.99
Spell Book (4-9 yrs)	£13.99
Star Wars Trilogy	£20.95
*Street Hockey	£16.99
Stunt Car Racer	£16.99
Sword of Aragon	£19.99
Sword of Twilight	£19.99
*Starblade	£16.99
Storm Lord	£13.99
Teenage Mutant Turtles	£17.45
Tennis Cup	£16.99
Test Drive 2	£16.99
Test Drive Euro Challenge	£11.99
*The Killing Game Show	£16.99
The Punisher	£16.99
*The Spy Who Loved Me	£16.99
*The Ultimate Ride	£16.99
Theme Park Mystery	£16.99
Third Courier	£16.99
Thrill Time Platinum II	£19.99
Thunderstrike	£16.99
Tie Break	£16.99
Turrican	£13.99
Tusker	£16.99
The Plague	£16.99
TV Sports Football	£19.99
TV Sports Basketball	£19.99
Time Soldier	£16.45
Toobin	£14.99
Treasure Trap	£16.99
Triad III	£19.99
*Ultima V	£19.99
*UMS 2	£19.99
Unreal	£19.99
Untouchables	£16.99
Ultimate Golf	£16.99
*Universe 3	£16.99
Venus Fly Trap	£13.99
War Head	£16.99
*War Jeep	£16.99
Wayne Gretzky Hockey	£19.99
Weather Watcher	£17.45
*White Death	£19.99
Wild Streets	£16.99
Wolfpack (1Mb)	£21.50
Xenomorph	£16.99
Xenon II Megablast	£16.99
Xenophobe	£16.99
X-OUT	£14.99
Web of Terror	£13.99
Zombi	£16.99

N.B. Some of the above titles may not have been released and some of the older titles may have been deleted.

LATEST RELEASES

*Bomber	£21.90
*Budokhan	£17.45
*Cartoon Capers	£14.90
*Chrono Quest II	£19.90
Combo Racer	£17.45
Conquest of Camelot	£27.99
Discover Maths	£13.90
*Kid Gloves	£15.90
Might & Magic	£21.95
Neuromancer	£17.45
Punisher	£16.99
*The Killing Game Show	£15.90

24 hour hotline for credit card orders

Access VISA

All prices subject to change without notice

All goods subject to availability. Titles marked * may not be released and will be sent on the day of release (subject to availability).

SALES HOTLINE

0923 89 69 69/071 381 6618

(MAIL ORDER)

To order: Please send cheque/PO/Access or Visa details to SK Marketing Ltd, 13 Moneyhill Parade, Uxbridge Road, Rickmansworth, Herts, WD3 2BE,

All prices include VAT and carriage is free (UK mainland)

South London:
10 Fulham Broadway
London SW6 1AA
Tel: 071 381 6618
Fax: 071 381 0528

North London:
13 Moneyhill Parade
Uxbridge Road
Rickmansworth
Herts WD3 2BE
Tel: 0923 896969
Fax: 0923 771058

PERSONAL CALLERS WELCOME AT BOTH SHOWROOMS

MONDAY-SATURDAY 9.30am - 5.00pm



Now you can own probably the toughest set of pens in the world – for much less than half price!

(Or buy two – and get them both for almost a quarter of the normal price)

The three pens that make up the Pentech 200 pen set can stand up to the roughest treatment you can inflict on them – and still give you best possible writing quality. The pens, made to the highest standards of workmanship, are not only robust but are of classic appearance suitable for all occassions from the home to the Board Room, from the school essay to the best selling novel

We have made a special purchase of a limited number of Pentech sets and can now offer you this unique, high-quality writing technology at a price never before possible.

The normal retail price is £37.85. But with this special offer you can buy one set for just £14.95. Buy a second to offer a colleague as a present and we'll send you the two sets for £20!

You can buy with confidence. Each set comes with a lifetime guarantee.

The three pull-top pens in their presentation case consist of

- One cartridge pen
- One ballpoint pen
- One fine liner

Choose from smart matt black or satin chrome metal finish

To order, please use the form on page 168

AMIGA COMPUTING

READER OFFERS

A VIDI SPECIAL OFFER

SAVE £15

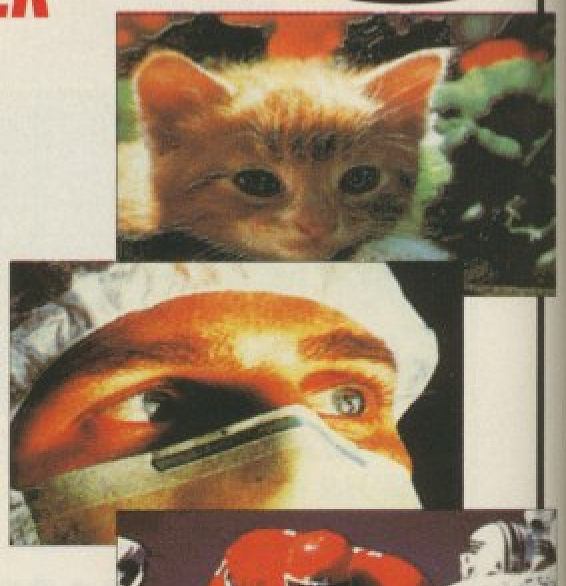
Thanks to a breakthrough by Rombo Productions in frame-grabbing technology, you can now produce good colour images quickly and cheaply with Vidi-Amiga and the VidiChrome colour software.

- *Take snapshots in 16 shades live from video*
- *Multiple frame store*
- *Dynamic cut and paste*
- *Full palette control*
- *Hardware and software control of brightness and contrast*
- *Compatible with all video standards*

"Vidi must be one of the most exciting peripherals you can buy for your Amiga" – *Amiga Computing, March 1990*

FULL PAL SCREENS





RRP £134.95*
OUR PRICE
£119.95

* Includes colour upgrade worth £19.95

See order form on page 168

Ear shattering offers for Amiga Computing readers

Make the most of your Amiga's superb sound capabilities by connecting Soundblaster's high quality stereo amplifier and speakers.

Using the latest microchip technology, the specially designed amplifier can deliver an ear-shattering five watts of music power, with twin controls provide complete control over volume and balance.

The fifty watt speakers consist of a woofer, a mid-range and a tweeter for the highest possible sound quality. Thumping bass, crisp trebles: You'll hear them all with incredible clarity.

The Amiga Soundblaster comes complete with mains adaptor and full instructions. No alterations to your computer are required – just plug in and switch on to re-discover sound on your Amiga.

SOUNDBLASTER

Boost your computer`s sound with an AMIGA SOUNDBLASTER



RRP £59.95
ONLY £44.95

Buy all 3 SAVE £20.90

QUARTET



Make beautiful music on your Amiga

Quartet is a stunning sequencing package that will allow you to compose anything from a jingle to a symphony.

Making full use of the Amiga's unique four channel stereo sound system, Quartet is equally at home playing Depeche Mode or Debussy. Quartet comes complete with complete instructions, a disk of full of sound samples and full source code to allow you to intergrate your tunes into your own programs.

What's more, Quartet is MIDI compatible, so you can connect a suitable keyboard or synthesiser to enter notes directly.

It's the ideal sequencer package to complement the excellent Master Sound sampler

– Amiga Computing, August 1990

Quartet comes with full instructions and two disks for £39.95



Master Sound

Capture any sound you hear and replay it in seconds

It's so easy to use: Simply connect the sampler to your Amiga, load the software and immediately you have the ability to capture sounds with amazing accuracy.

Connect your compact disc player or personal stereo and digitise sounds to incorporate into your own games and tunes.

The supplied software provides complete control over the sampled sounds: Cut and paste them, flip and fade them and you're still only using a tiny fraction of the sound processing tools available.

Best of all, the comprehensive instructions will soon have you creating your own public domain demo disks complete with IFF picture files.

The perfect sound sampling package for beginners and experts alike.

Master Sound is a complete hardware and software sampling system for only 34.95

"Is it real or is it Master Sound?"

– Amiga Computing, May 1990

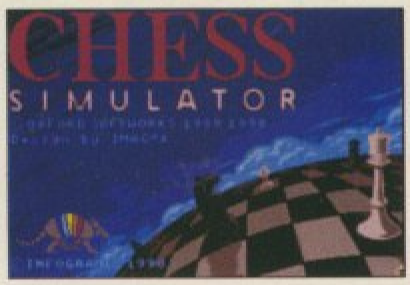
See order form on page 168

AMIGA COMPUTING

DISK BARGAINS

Chess Simulator

Infogrames have taken this timeless classic and added a whole range of added features to bring you Chess Simulator.



Chess Simulator is the ideal partner for budding Chess enthusiasts. It's perfect for guiding and improving your talents until you ultimately attain the standard of the Grand Masters. Infogrames' game includes a whole range of outstanding features including: An intelligent opening moves library, countless levels of play, advise options, save and restore options, 3D views and a wide range of different piece designs.

Our Price £19.95

American Dreams

NEW

Four action and strategy games are included in this sensational package from Infogrames.



Super Ski

Test your talent in **SUPER SKI** on the ski jump, slalom, giant slalom and downhill races.

HOSTAGE OPERATION JUPITER is a strategic operation in which you direct manoeuvres to release the hostages held by terrorists in an embassy.

OPERATION NEPTUNE involves you in underwater warfare, destroying enemy submarines and bases.

BUBBLE GHOST will keep you busy for hours trying to guide a fragile ghost through a castle's numerous traps.

Great value for money. Don't miss this offer!

Our Price £17.95

Future Dreams

NEW

Four unbeatable arcade games at an unbelievable price from Infogrames.



Purple Saturn Day

PURPLE SATURN DAY – A unique game which has achieved legendary status in the arcade games arena. Participate in the Intergalactic Games – if you dare!

SPIDERTRONIC – 3D action and digitised sound enhance this fascinating strategy game..

G.NIUS – Your space station has crashed on an unknown planet. Escape the wreck before it disintegrates around you. Timed action and a frantic pace.

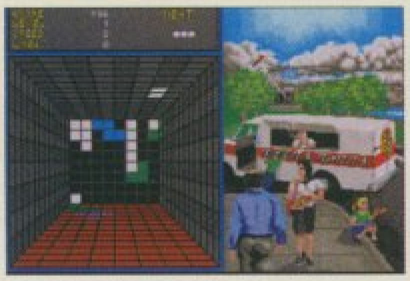
WARLOCK'S QUEST – An arcade adventure swarming with evil creatures and sneaky, devilish traps. If you like arcade games, this one's for you.

Great value for money. Don't miss this offer!

Our Price £17.95

Welltris

Challenging arcade fun from Infogrames. Welltris is a wacky puzzle game that'll have you on the edge of your seat.



After the fabulous international hit, Tetris, join Alexey Pajitnov, grand mathematician of the Soviet Academy of Sciences, and take up his new challenge, Welltris: control the falling pieces, move the volumes and ultimately master space.

Welltris has a host of options including: Three levels of difficulty (beginner, advanced and expert), amazing 3D perspective, various game speeds, scoring system with top ten scores recorded.

100% pure Glastnost!

Our Price £17.95

TO ORDER PLEASE USE THE FORM ON PAGE 168

Reader offers

It's Amazing! It's Radical! It's the Rolling Ruler!



A complete drawing board in one simple unit. With a rolling ruler you can draw:

★ Horizontal parallel lines
★ Vertical parallel lines
★ Perfect right angles with ease
★ Any other angles from 1° to 359°
★ Clever circles

Available in two sizes 22cm (8in) and 30cm (12in) this great offer gets you both rolling rulers for just £5.95 (RRP £9.99)

It's innovative design gives the new rolling ruler the ability to draw vertical and horizontal lines without lifting it off the paper, parallel lines, angles, circles, musical staves and graphs with ease, making it ideal for the home, the office, schools, workshops and 3D design work.

AMIGADOS: A Dabhand Guide

Is a comprehensive guide to the Commodore amiga's disc Operating System (Versions 1.2 *and* 1.3). It provides a unique perspective on this powerful system in a way which will be welcomed by the beginner and the experienced user alike.

Rather than simply reiterating the Amiga manual, this book takes a genuinely different approach to understanding and using the Amiga and contains a wealth of practical hands-on advice and hints and tips.

The many features of this book include:

- Full coverage of Amiga DOS 1.3 functions
- Filing with and without the Workbench
- The Amiga's hierarchical filing system
- Pathnames and Device names
- The Amiga's multitasking capabilities
- The AmigaDOS screen editor
- AmigaDOS commands
- Batch processing
- Amiga Error code descriptions
- How to create new systems discs
- Use of the RAM discs
- Using AmigaDOS with C

Amiga Computing approved reading



£14.95

SAVE on batteries

For your personal stereo, radio or TV

You know how expensive it is to replace your batteries when they run down.

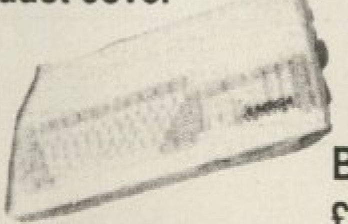
Even with rechargeable batteries you still have to wait 14 hours for full charge. We have solved the problem with the unique superfast powerful battery and charger kit.

This amazing device will completely charge four standard AA size rechargeable batteries in under 2 hours and each battery can be recharged at least 1,000 times.

Further, for a limited period we can sell the charger and four rechargeable batteries at the staggeringly low cost of £19.95 (plus £1 p&p).

IT WILL PAY FOR ITSELF WITHIN WEEKS!

Keyboard dust cover (A500) £4.95



Protect your Amiga with this top-quality cover made from clear, water-resistant vinyl. It's bound with strong cotton and features the Amiga Computing logo.

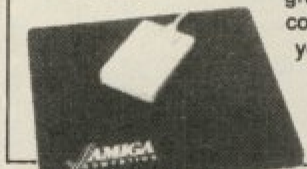
Binder £5.95



Twelve rods hold your issues in place and keep them in pristine condition in this smart PVC binder.

Mouse mat £6.95

The perfect desktop environment for your mouse with its specially-designed, perfect-grip surface. It ensure much smoother movement, gives super-positive control and protects your table top from scratches.



Disc storage box £4.95

This luxury padded box is the ideal storage medium, holding up to FIFTY 3.5" discs

SAVE £25

DG CALC

Sells for £39.95 . . . but yours only £14.95

DG Calc is one of the most powerful and easy to use spreadsheets in its price bracket. It offers all the features you could think of, and many more besides.

Specially written to make the best use of the Amiga's features, DG Calc is an invaluable addition to your business utilities.

Some of DG Calc's numerous features:

- 512 rows by 52 columns
- Menu or command driven
- Adjustable column widths
- Text overflow
- Instant recalculation
- Intergrates with other program
- Window feature
- User definable formulas
- GOTO feature
- Password protection
- Cell justification
- Powerful line deitor
- UNDO feature
- Beginner's tutorial
- Supports keyboard or mouse
- UK only

MONUMENTAL MUSIC STUDIO

TEL: 0634 576353

2 MEG EXPANSION FOR AMIGA 500 £149.95 ONLY

.5 MEG EXPANSION £34.95

AMIGA 500 SCREEN GEMS PACK £349.95

MUSIC X 1.1 £79.95

YOUR MUSIC PUT ON VINYL, INC. FULL RECORDING & PRODUCTION £175.00

MUSIC X TUITION AT OuR STUDIO £40

MONUMENTAL DRUM SAMPLES VOLUME 1

60 IFF SAMPLES £6.95

MONUMENTAL MUSIC

Unit 30, Pier Road Ind. Est. Gillingham, Kent ME7 1RZ

KAD-SOFT UK

BRITAIN'S FASTEST GROWING AMIGA PD LIBRARY

KA1 - The Business Collection, Editor, Spreadsheet & Database
KA2 - The Wordprocessor for the Amiga
KA3 - C-Compiler Assembler & Linker
KA4 - RIM the brilliant Database Program
KA5 - Disk Doctor Collection
KA6 - CLI Help. Worried by CLI? This one will make everything clear.
KA7 - A Collection of brilliant arcade games.
KA8 - Predators Mega Demo. Brilliant twin disk demo.
KA9 - Break our construction set
KA10 - Nightmare on Elm Street Demo
KA11 - North Star and Silent Demo
KA12 - Star Trek Modulator 2 Game
KA13 - Deluxe Music. A collection of instruments for the original program
KA14 - Magnetic Fields Demo. The Ultimate Bobs & Sprites Demo
KA15 - Robocop Demo. Brilliant
KA16 - Star Trek The Next Generation. 1 Meg shareware version
KA17 - Space Ace demo
KA18 - The North Star Mega Demo
KA19 - Cool Cougar Demo. Cartoon quality
KA20 - Virus Killer
KA21 - The Anti-ST Demo Disk
KA22 - The Miami Vice demo. Digitized sounds
KA23 - Kylie Minogue Demo disk 1
KA24 - Kylie Minogue Demo disk 2. Needs KA23 to run.
KA25 - Larn version 12. Brilliant Dungeons and Dragons game.
KA26 - Shanghai. Playable demo of great game.
KA27 - Utilities collection 1. Quick copy, P copy, Dir Master, Funckery, Blitz, Virus X
KA28 - Games Collection 1, Cribbage, Tiles, Bullrun, Tic Tac Toe.
KA29 - Games Collection 2, Amoeba, Yelp, Rock Slide, Egyptian Run.
KA30 - Bankn, Home Help, Home Finance Packages.
KA31 - Elvira Brilliant Demo
KA32 - RAF Mega Demo. Brilliant 2 disc demo
KA34 - North Star & Fair Light Mega Demo 3 brilliant 2 disc demo
KA35 - Deaths Star Mega Demo – Yet another great twin disc demo
KA36 - Fractal Flight. Brilliant fractal demo
KA37 - V12 Slideshow
KA38 - V12 Games Collection. 3 Disks
KA39 - Holy Grail Adventure. Brilliant text adventure. 1 Meg required
KA40 - Star Trek. The new version as recently reviewed - 2 disks
KA41 - Coma Demo. The brilliant demo

All discs – £2.50 onc P&P
Ring for FREE Catalogue
2 Disks FREE with every 10 ordered

We stock the complete range of Fish, Amicus, Slip Disk, T-Bag and Panorama Disk Collections

DISKS

3.5" 135 tpi DD/DS Disks Unbranded (KAO, Sony) 100% error free. Certified very high quality will format to 880k easily.

10	25	50	100	200
£6.80	£13.80	£26.00	£52.00	£92.00

All prices include P&P, Labels
No quibble Money Back Guarantee

	10	25	50	100	200
80 cap	£12.25	£18.00	£32.50	£53.50	£95.00
100 cap	£13.80	£18.75	£33.90	£54.80	£97.00
120 cap	£14.50	£19.40	£35.00	£55.90	£98.95

ACCESSORIES

Disk Boxes
80 cap – £6.75
100 cap – £7.75
120 cap – £8.75
Banx Boxes in stock – £11.00
Mouse Mats – £3.75
Mouse Holders – £3.75
Amiga Dust Covers – £4.50
A500 ½ Meg Upgrade – £48.00

Open 8am – 10.30pm – 7 days a week

OVERSEAS ORDERS PLEASE ADD £1.25

VISA

Send Cheques & P/O's payable to
KAD-SOFT, 2 EBOR PADDOCK, CALNE, WILTS. SN11 0JY
TEL: 0249 817174

PROMPT DELIVERY
85a MANSFIELD RD,
DAYBROOK,
NOTTINGHAM,
NG5 6BH

COMPUTER LAB

24 HOUR ORDERLINE

TELEPHONE: NOTTM.
(0602) 673674/673672

HARDWARE

AMIGA PACKS
INC. MODULATOR/WORKBENCH
THE VERY FIRST/ EXTRAS/BASIC.

FLIGHT OF FANTASY PACK	£349.00
SCREEN GEMS PACK	£349.00
CLASS OF THE 90's PACK	£499.00
FIRST STEPS PACK	£499.00

AMIGA 2000 Please ring for best prices
AMIGA 3000 Please ring for best prices

SEGA MEGADRIVE
MEGADRIVE £149.00
SOFTWARE ALL AT DISCOUNTED PRICES, PLEASE RING FOR DETAILS.

PRINTERS

STAR LC10	£156.00
STAR LC10 COLOUR	£197.50
STAR LC24-10	£235.00
COMMODORE MPS1230	£140.00

MONITORS

ATARI SM124 HIGH RES MONITOR	£140.00
PHILIPS 8833 STEREO MONITOR	£255.00

NEO GEO
Please ring for Best discounts on Hardware and Software – the very best games machines in the world today!

SOFTWARE

We carry an extensive range of software for all machines, all at discounted prices – at least 25% off RRP, for example

	RRP	Our Price
BADLANDS	£24.99	£18.50
CADAVAR	£24.99	£18.50
EUROPEAN SUPER LEAGUE	£19.99	£15.50
F.19 STEALTH FIGHTER	£29.95	£22.95
GREMLINS II	£24.99	£18.50
INDIE 500	£24.99	£18.50
LOTUS TURBO ESPRIT	£24.99	£18.50
NEW YORK WARRIORS	£19.99	£15.50
NIGHT BREED	£24.99	£18.50
PARADROID 90	£24.99	£18.50
SPY WHO LOVED ME	£19.99	£15.50
VOODOO NIGHTMARE	£24.99	£18.50

ORDER BY PHONE
(0602) 673674/673672
Delivery – Please add £6.50 courier delivery for orders over £100 Add £2.00 p&p for orders under £100
Order by Fax
Order by cheque made payable to Computerlab
ALL PRICES INCLUDE V.A.T.

PUBLIC DOMAIN DISKS

We have an extensive range of public domain and Shareware programs. Please ring for details of our Amiga and ST libraries.

SEVEN DISK SPECIALS ONLY £10.95

AMIGA DEMOS PACK 4 – All of the best latest demos. Pack changes all the time but never has same demos twice.
AMIGA BUSINESS PACK – Spreadsheet, Wordprocessor, Database, Journal, N.A.G., Inventory.
AMIGA UTILITY PACK 2 – Virus killers, Copiers, Disk Managers, Rippers, Boot copier *PLUS Loads more!*
AMIGA PROGRAMMERS PACK – C Compilers, Assemblers, Source Codes, Pascal, LISP, C Manual etc.

BLANK DISKS

3.5" QUALITY DISKS £12.00 FOR 30*
*FULLY GUARANTEED DSDD 100% CERTIFIED

PERIPHERALS

AMIGA HALF MEG UPGRADES	£35.00
AMIGA SECOND DRIVE	£65.00
NAKSHA MOUSE	£33.50
LINNET MODEM	£145.00
LINNET 1200 MODEM	£212.00
A590 20Mb HARD DRIVE	£365.00
HARDWARE VIRUS PROTECTOR	£14.95

Please enquire for the latest prices on RAM upgrades for the A590

MUSIC PROGRAMS

	RRP	Our Price
MUSIC X	£199.00	£148.50
MUSIC X JUNIOR	£79.99	£63.50
PRO 24		Please Enquire
KCS 3.0/DR.T	£299.00	Please Enquire
MASTER TRACKS PRO	£289.00	Please Enquire
TFMX	£44.95	£39.50

Advertisers' Index

ng that's t for all e PC

C!
O!
E!
S!
G!
E!

g.
elp
u'll
ld.
ks.
ne
gh
h!



LOOK!

Here's a bumper pack of goodies for everyone!

As a new member of the growing *Let's Compute!* Club you'll get a giant package of gifts to help you make the most of your computer. In addition to your Gold Membership Card you'll also receive lots of software on disc or tape, plus a ballgame, notepad, stickers, badge, hat, £200 worth of money-saving vouchers – and much, much more.

It costs only £5 to join, but if you subscribe to *Let's Compute!* on the form alongside you can also become a founder member, with all the same privileges, for just £3!

LET'S COMPUTE! CLUB

Become a founder member NOW!

MICROSMART

Titles marked * are not yet available and will be sent on day of release. Please state make and model of computer when ordering
P & P Inc. UK on orders over £5.
Less than £5 and Europe add £1 per item. Elsewhere please add £2 per item for airmail. These offers are available mail order only.

Tel orders: 0908 564369 (24 hrs)

☆ BLOOD MONEY + INFESTATION PACK £14.99 ☆ ☆ AMIGA 512K RAM + CLOCK £44.99! ☆
SHADOW OF THE BEAST II £24.99

GAME	AMIGA
1/2 Meg Upgrade with clock	49.99
Addidas Football	16.99
688 Attack Sub	16.99
AMOS	32.99
Anarchy	13.99
Assault on Alcatraz*	16.99
Austerlitz	16.99
B.A.T.*	16.99
Back To The Future 2*	16.99
Back To The Future 3*	18.99
Balance of Power '90	16.99
Bards Tale 2	16.99
Bards Tale 3*	16.99
Batman The Movie	16.99
Battle Of Britain	16.99
Battlechess	18.99
Battle Command*	16.99
Battlemaster*	16.99
Beach Volley	16.99
Betrayal*	19.99
Billy The Kid*	16.99
Blade Warrior*	16.99
Bloodwych Data Disk	9.99
Bomber	21.99
Boxing Manager	13.99
BSS Jane Seymour*	16.99
Budokan	16.99
Cabal	16.99
Carrier Command	14.99
Castle Master	16.99
Cavadar*	16.99
Chase HQ	16.99
Chase HQ 2*	16.99
Chuck Yeager*	16.99
Combo Racer	13.99
Codename Ice Man (1 Meg)	29.99
Colonels Bequest (1 Meg)	29.99
Commando War*	18.99
Conquest Camelot (1 Meg)	26.99
Conqueror	18.99
Continental Circus	13.99
Corporation	16.99
Crackdown	16.99
Crazy Cars 2	14.99
Cyberball	13.99
Damocles	16.99
Dan Dare 3	13.99
Dark Century	16.99
Days Of Thunder*	19.99
Deluxe Music Con Kit	69.99
Deluxe Paint 3	59.99
Deluxe Photolab	59.99
Deluxe Print 2	69.99
Deluxe Production	89.99
Deluxe Video 3	79.99
Dick Tracy*	16.99
Dr Doom	16.99
Dragons Lair 2	26.99
Dragon Ninja	15.99
Dragon Spirit	12.99
Dragons Breath	21.99
Dragons Lair (1 Meg)	26.99
Dragons Of Flame	16.99
Drakken	21.99
Dungeon Master	16.99
Dungeon Master Editor	7.99
Dungeon Master Hint Book	9.99
Dynamite Debugger*	16.99
Dynasty Wars	16.99
Edition One	16.99
Elite	14.99
Emlyn Hughes	13.99
Emlyn Hughes Quiz*	13.99
Escape From Robot Monsters	13.99
F-16 Combat Pilot	16.99
F-19 Stealth Fighter	19.99
F-29 Retaliator	16.99
Falcon	19.99
Falcon Mission Disk	13.99
Falcon Missoin Disk 2*	13.99
Farey Tale Adventure	13.99
Ferrari Formula 1	16.99
Fighting Soccer	16.99
Final Battle*	16.99
Fireball*	16.99
Fire And Forget 2*	16.99
Fire And Brimstone*	16.99
Flight Simulator 2	26.99
Flight Of The Intruder*	19.99
Fit Disk 7 or 11	13.99
Fit Disk European	13.99
Fit Disk Japan	13.99
Football Director 2	12.99
Football Manager 2 Gift Pk	12.99

GAME	AMIGA
Fooballer Of The Year 2	13.99
Full Metal Planete	16.99
Fun School 2 (6-8)	11.99
Fun School 2 (over 8)	11.99
Fun School 2 (under 6)	11.99
Future Wars	16.99
Ghostbusters 2	16.99
Ghosts and Goblins	13.99
Ghouls and Ghosts	16.99
Golden Shoe*	16.99
Grand Prix Circuit	16.99
Gravity	16.99
Gremlins 2*	13.99
Gunship	14.99
Hard Drivin	13.99
Heavy Metal	16.99
Heroes*	16.99
Highway Patrol 2	16.99
Hillsfar	16.99
Hounds Of Shadow	16.99
Imperium*	16.99
Impossamole	13.99
Indy Jones Action	13.99
Indy Jones Adventure	16.99
Interphase	16.99
Int Champ Wrestling	16.99
Int Soccer Challenge*	16.99
Iron Lord	16.99
Italy 1990*	16.99
It Came From The Desert (1 Meg)	17.99
It Came From The Desert Data*	8.99
Ivanhoe	16.99
Jack Nichlaus Extra Courses	8.99
Jack Nichlaus Golf	16.99
Jack Nichlaus Unlimited Golf	19.99
Jumping Jackson	16.99
K Quest 1, 2, 3, 4, Hint Book	5.99
Keef The Thief	16.99
Kennedy Approach	14.99
Kick Off	11.99
Kick Off 2	12.99
Kick Off Extra Time	7.99
Kid Gloves	16.99
Killing Game Show*	16.99
Kind Words 2	34.99
Kings Quest 4	21.99
Kings Quest Triple	26.99
Klaxx	13.99
Knight Of The Crystallion	21.99
Kult Hint Book	14.99
Leaderboard Birdie	18.99
Leisure Suit Larry 2	26.99
Leisure Suit Larry 3	26.99
Licence To Kill	12.99
Life And Death*	19.99
Light Force	16.99
Lombard RAC Rally	14.99
Loom	16.99
Lords Of Chaos*	16.99
Lost Patrol	18.99
Magnum 4	16.99
Manchester Utd	16.99
Manhunter In New York	21.99
Manhunter Hint Book	6.99
Manhunter In San Francisco	21.99
Maniac Mansion	16.99
Matrix Marauders*	13.99
Microprose Soccer	14.99
M1 Tank Platoon*	21.99
Midnight Resistance	16.99
Mid Winter	19.99
Murder*	16.99
New Zealand Story	16.99
Nightbreed*	16.99
Ninja Spirit	16.99
Ninja Warriors	13.99
Nitro*	16.99
North and South	16.99
Off Road Racer*	13.99
Operation Harrier*	16.99
Operation Stealth*	19.99
Oriental Games*	16.99
Operation Harrier*	16.99
Operation Thunderbolt	16.99
Operation Wolf	14.99
Pang*	16.99
Paradroid 90*	16.99
Paperboy	12.99
Pipemania	16.99
Pirates	15.99
Player Manager	12.99
Ploting*	16.99
Police Quest	16.99
Police Quest 1, 2 Hint Book	6.99

GAME	AMIGA
Police Quest 2	16.99
Populous	16.99
Populous Promised Land	7.99
Powerdrome	16.99
Powerdrift	16.99
Powermonger*	16.99
Precious Metal	15.99
Pro Tennis Tour	16.99
Rainbow Islands	16.99
Red Storm Rising	16.99
Resolution 101	16.99
Rorkes Drift	16.99
Rick Dangerous	15.99
Rick Dangerous 2*	16.99
Risk	13.99
Robocop	15.99
Robocop 2*	16.99
Rocket Ranger 2	17.99
Rotox*	18.99
Run The Gauntlet	15.99
RVF Honda	14.99
S Quest 1, 2, 3, Hint Book	6.99
Secret Of Monkey Island*	19.99
Shadow Warriors	16.99
Shadow Of The Beast	24.99
Shadow Of The Beast 2	24.99
Sherman M4	18.99
Shinobi	12.99
Shoot 'em Up Con Kit	19.99
Silkworm IV*	13.99
Sim City	19.99
Sim City Terrain	13.99
Silkworm	16.99
Skate or Die*	16.99
Sleeping Gods Lie	14.99
Sly Spy*	16.99
Sound Express Stereo Sampler	34.99
Snowstrike*	16.99
Space Ace	26.99
Space Quest 3	26.99
Space Harrier 2	13.99
Spy Who Loved Me*	13.99
Star Wars Trilogy	16.99
Star Flight	16.99
Star Flight Hint Book	5.99
Star Glider 2	14.99
Strider	16.99
Stunt Car Racer	15.99
Stun Runner*	13.99
Subbuteo	12.99
Supemacy*	19.99
Supercars	13.99
Swords Of Twilight	16.99
Swords Of Twilight Hint Book	5.99
Teenage Muntant Turtles	24.99
Test Drive 2	18.99
Test Drive 2 California Chall	9.99
Test Drive 2 Muscle Cars	9.99
Test Drive 2 Supercars	9.99
The Cycles	16.99
The Jetsons	16.99
The Plague	16.99
Theme Park Mystery*	16.99
The Kristal	9.99
The Plague	16.99
Thunderstrike	16.99
Time Machine	16.99
Toki*	16.99
Total Recall*	16.99
Tracksuit Manager	12.99
Trained Assassin	13.99
Triad Vol 3	19.99
Turbo Outrun	16.99
TV Sports Baseball	19.99
TV Sports Basketball	19.99
Twin World	16.99
UN Squadron*	16.99
UMS	14.99
UMS 2*	15.99
UMS Scenario 1	11.99
UMS Scenario 2	11.99
Unreal*	16.99
Untouchables	18.99
Verminator	13.99
Vortex	13.99
Walker*	16.99
Warhead	16.99
Waterloo	16.99
Wayne Gretzky Hockey	14.99
Wild Streets	16.99
Wings*	19.99
Wings Of Fury*	13.99
World Cup soccer 90*	18.99
Xenomorph	16.99
Xenon 2 Megablast	16.99
Zombi	16.99

MICROSMART MEGA DEALS!!

Half Meg Upgrades

512K Upgrade inc. clock with It Came From The Desert - **£54.99**

512K Upgrade inc clock with Gold Of The Realm - **£49.99**

512K Upgrade inc clock with Dragons Lair - **£69.99**

512K Upgrade inc clock with Space Ace - **£69.99**

512K Upgrade inc clock with Dungeon Master - **£69.99**

512K Upgrade inc clock with Manhunter 2 - **£69.99**

Naksha Mouse inc mouse mat, mouse house and Deluxe Paint - **£26.00**

Contriver Replacement Mouse inc Deluxe Paint - **£19.99**

Quality Second Disk Drive - **£59.99**

Blank Disks Sony Unbranded with labels **69p Each**.

KAO Unbranded with labels **60p Each**.

☆ AMIGA SPECIALS ☆

Blood Money	9.99
Never Mind	7.99
Infestation	9.99
Chronoquest 1	9.99
Chronoquest 2	9.99
Leaderboard	6.99
Rocket Ranger	9.99
Marble Madness	7.50
Bards Tale 1	7.50
TV Sports Football	12.99
Galaxy Force	4.99
Brian Cloughs Football	8.99
F-18 Interceptor	9.99
Eliminator	4.99
Fish	7.99
Trivial Pursuits New Beginning	8.99
Saint and Greavsie	7.99
Kristal	9.99
Emmanuelle	7.99
Lords Of The Rising Sun	11.99
Batman The Movie	9.99
Fernandez Must Die	6.99
Hunt For Red October	9.99
Pacland	6.99
Pacmania	8.99
Starglider 2	7.99
Conflict In Europe	7.99
Joan Of Arc	7.99
Trivial Pursuit	9.99
Nebulus	4.99
Cybernoid 2	4.99
Hollywood Poker Pro	7.99
Gold Of The Realm (1 Meg)	9.99
Baal	7.99
Menace	7.99
Ballistix	7.99
Shadow Of The Beast	16.99
Laser Squad	8.99
Passing Shot	4.99
3 Stooges	9.99
Tank Attack	9.99
Seven Gates Of Jambala	4.99
Chambers Of Shoalin	7.99
Bloodwych	9.99
Interphase	9.99
Gauntlet 11	7.99
Spy v Spy	4.99
Spy v Spy 2	4.99
Spy v Spy 3	4.99
Centrefold Squares	7.99
Phobia	4.99
Italia 90	4.99
SAS Combat	4.99
Captain Blood	4.99
Barbarian Psygnosis	6.99
Drum Studio	4.99
Sidewinder 2	4.99

SOUND EXPRESS STEREO SAMPLER £34.99

Please send orders and cheque/PO/Access/Visa No. and expiry date to: Microsmart, 125 High Street, Stony Stratford, Milton Keynes MK11 1AT.

The Tipster-International

Can your Amiga even the odds? Paul Austin studies the form

If you are a wild eyed thrill seeker, who lives only to dispatch mutant scum to another dimension, this is probably not the one for you. On the other hand, if you're a level headed type who enjoys an occasional flutter and wants to take a little of the gamble out of gambling The Tipster could be ideal.

The program is designed to be used in conjunction with any daily newspaper either home or abroad which gives good quality racing coverage – the *Daily Mirror* being recommended for British races.

Unlike most programs, the first thing to do is NOT slam the disk in and see what happens. Read the instructions – it's well worth the effort. This will explain the rather complex procedure involved in entering details for your first meeting.

The first thing to do is to fill in your data sheet, which should contain all the information relating to the meeting and your first race. And I do mean **all** – date, course, going, time, distance, runners and the type of race. A list of all the top trainers and jockeys is also required. And I'm afraid this is just the beginning. Now come the details for each horse.

These must include the trainer and jockey, recent form, weight carried, the age, its favourite soap opera... in short everything that relates to the horse and its recent outings. This must be repeated for every nag in the race, a daunting prospect, but perhaps not as daunting as facing your other half with the news that the housekeeping is still to clear the last at Newmarket.

Once your data sheet is complete, slam in the disk. OK, this is your chance to type all the information from the data sheet into your Amiga. I'm told that, with practice, the required info can be entered directly into the machine from the newspaper at a rate of four races per half hour.

The program operates via mouse and keyboard, options being selected by activating the window via mouse. Then alterations are made with the keyboard. Unfortunately this process must be carried out for every input of data, which means constant jumping from keys to mouse, which dramatically slows things down.

The operating system is a classic case of over design. A straight-forward keyboard controlled file format may not have been as pretty, but a lot more user friendly.

After all the typing and clicking is over, the program makes an analysis of the race, hopefully giving you the forecast for first and second, plus the best value bet available. This can be displayed in forecast, graph, full data and print-out formats. Also all data can be save to disk if required.

User parameters can also be created. This allows the details for different types of races to be saved on to disk – useful if you feel confident that your system may be better concerning certain race.

Buying Tipster gives you access to the backup service provided by Tam Marketing – monthly news letter, discount upgrades, a Saturday betting service and all sorts of goodies. At a small fee,of course.



The simpliest of many option screens.



Here's how things should go.

The tipster bench-test results

Results over a seven day period three races per-day.

21 seperate races detailed. Positions and odds.

Best value represents the best each-way bet, as a result best values can be placed anywhere in the first three. All odds are for/against.

No third place details available.

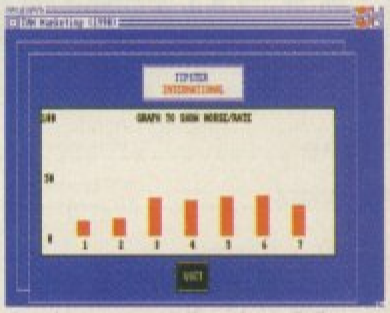
	Firsts	Seconds	Best value
1			Kalas princess 50/1
2		Sharpford 14/1	Sharpford 14/1
3			Gardeners choice 5/1
4			
5	Ronocco 20/1		
6	Wingspan 4/9	Auntie dot 7/2	Auntie dot 7/2
7			Riviera magic 6/1
8	Rami 11/8	Swordsmith 6/1	Swordsmith 6/1
9	Remthat naser 11/10	Fair fortune 6/5	
10	Golden celtic 8/11		
11		Desert palm 11/4	
12			
13			
14	Vain glory 4/9		
15			Deep decision 5/1
16			
17	Wingspan 4/5		
18			Kalshan 7/4
19			Centaur song 10/1
20			
21	Farm week 5/2		Farm week 5/2

Winnings details should be considered as a close approximate.

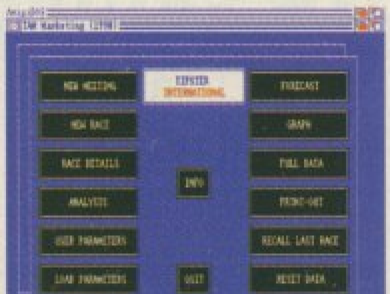
If a £1.00 bet was placed on the nose of each of Tipsters predicted winners over the sample period, the total winnings would be £35.00 this includes the return stake of £8.00 on winning horses, minus the £21.00 original stake leaves you with £14.00 of pure profit. Try to contain yourself, you gambling fool you!

Now here's the bad news, If £1.00 each way was placed on the best value horse in each of the races, I'm afraid a lose of £9.75 would have been the sad result. £42.00 stake money with a miserable £32.25 return.

Keep in mind that the bench test was conducted over a relatively short period when making your judgement on the program . Perhaps with the required effort you could see some results, but you would have to be very keen on the *Gee-Gees*, either that or very greedy.



Graphic representation of predictions.



Try to control your excitement

THE TIPSTER - INTERNATIONAL
T.A.M. Marketing (0395) 513558
£29.95

This is by no means the simplest of programs to use, but if you are willing to make the effort you may be on a nice little earner.

THE AMIGA 500 PC/XT IS HERE



Run Professional MS DOS Software on your Amiga 500 at a price you can afford

PRICE SLASH NOW £299.00 INCLUSIVE

KCS POWER PC BOARD

Why did you buy an Amiga 500?

Of course, because of its superb graphics, music and animation capabilities. However if you want to get serious, you soon realise that it is distinctly lacking in memory and professional software.

Well – they said it could never happen – but it's here at last!

You! In your own home can transform your Amiga 500 into a real IBM compatible with Amiga memory expansion up to one and a half megabytes.

It's simple – no screwdriver, no soldering iron and no technical knowledge required. Just turn your Amiga over, open the cover, slide the Power PC Board into the connector, close the cover and your Amiga PC/XT is ready. (In other words, no loss of guarantee)

You are now ready to use a wealth of professional MS DOS software at speeds faster than a PC/XT (ind. review), **and in colour,** with compatibility thanks to Phoenix-Bios.

You can also rely on the correct date and time at any moment in Amiga and MS DOS mode.

★ Video support: monochrome, Hercules and Colour Graphics Adaptor (CGA) (4 and 8 colours)
★ Disk support: internal 3.5" external 3.5" external 5.25" drive. (Software-upgrade to H/D A590 in pipeline)
★ Including MS DOS 4.01, MS DOS shell and GW Basic (market value approx £130.00)
★ Including English Microsoft books + KCS manual
★ Further exciting software upgrades in the pipeline
★ Available memory: 704KB + 64KB EMS in MS DOS mode, 1 megabyte + 512KB RAM (disk) buffer in Amiga mode
★ No extra power supply necessary thanks to the most modern CMOS and ASIC technology
★ OK with TV. No special monitor required
★ Price: **£299.00 including VAT and Postage. Access and Visa accepted.**
★ For export price please contact us
★ Trade enquiries welcome (UK – Scandinavia – and all English language.)

Compatibility is excellent but no-one can guarantee every single program available, therefore if your purchase depends on a particular program, please ask us first or send in a copy of the program. (With suitable S.A.E. if to be returned). Price subject to change without notice.

BDL

BITCON DEVICES LTD.
88 BEWICK ROAD, GATESHEAD,
TYNE & WEAR, NE8 1RS ENGLAND.
Tel: (091) 4901919/4901975.
Fax: (091) 4901918